

DEPARTMENT OF RAILWAYS AND CANALS

CANAL STATISTICS

FOR THE

SEASON OF NAVIGATION

1911

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

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EXCELLENT MAJESTY

1912

To Field Marshal His Royal Highness PRINCE ARTHUR WILLIAM PATRICK ALBERT, Duke of Connaught and of Strathearn; Earl of Sussex, in the Peerage of the United Kingdom; Prince of the United Kingdom of Great Britain and Ireland; Duke of Saxony; Prince of Saxe-Cobourg and Gotha; Knight of the Most Noble Order of the Garter; Knight of the Most Ancient and Most Noble Order of the Thistle; Knight of the Most Illustrious Order of St. Patrick; One of His Majesty's Most Honourable Privy Council; First and Principal Knight Grand Cross and Great Master of the Most Honourable Order of the Bath; Knight Grand Commander of the Most Exalted Order of the Star of India; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George; Knight Grand Commander of the Most Eminent Order of the Indian Empire; Knight Grand Cross of the Royal Victorian Order; Personal Aide-de-Camp to His Majesty the King; Governor General and Commander-in-Chief of the Dominion of Canada.

MAY IT PLEASE YOUR ROYAL HIGHNESS,—

The undersigned has the honour to present to Your Royal Highness Canal Statistics, for the year ended December 31, 1911.

F. COCHRANE,
Minister of Railways and Canals.

To the Honorable F. COCHRANE,
Minister of Railways and Canals.

SIR,—I have the honour to submit the annual report of the Comptroller of Statistics in relation to the operations of the Canals of the Dominion for the year ended December 31, 1911.

I have the honour to be, sir,

Your obedient servant,

A. W. CAMPBELL,
Deputy Minister of Railways and Canals.

OFFICE OF THE COMPTROLLER OF STATISTICS,

OTTAWA, February 15, 1912.

A. W. CAMPBELL, Esq., C.E.,
Deputy Minister of Railways and canals.

SIR,—I have the honour to submit to you herewith Canal Statistics for the year ended December 31, 1911.

The aggregate volume of freight moved through all the canals amounted to 38,030,353 tons, which was a decrease of 4,960,255 tons as compared with the year 1910. This decrease is more than accounted for by the decline in traffic at Sault Ste. Marie, applicable almost wholly to American ore. An increase of 211,339 tons through the Welland canal, and of 344,956 tons through the St. Lawrence canals, would point to satisfactory growth as far as strictly Canadian business was concerned.

The freight traffic of 1911 was distributed among the various canals of the Dominion as follows.

	Tons.	Increase.	Decrease.
Sault Ste. Marie.....	30,951,709	.....	5,443,978
Welland.....	2,537,629	211,339	.....
St. Lawrence.....	3,105,708	344,956	.....
Chambly.....	599,829	.....	69,470
St. Peter's.....	75,298	.....	10,653
Murray.....	163,457	.....	14,484
Ottawa.....	320,071	.....	65,190
Rideau.....	172,227	37,346	.....
Trent.....	57,290	11,027	.....
St. Andrew's.....	47,135	38,852	.....
Total.....	38,030,353	643,520	5,603,775

The development of business through the canals of Canada during the past decade is shown in the following statement :

1902.....	7,513,197 Tons.
1903.....	9,203,817 "
1904.....	8,256,236 "
1905.....	9,371,744 "
1906.....	10,523,185 "
1907.....	20,543,639 "
1908.....	17,502,820 "
1909.....	33,720,748 "
1910.....	42,990,608 "
1911.....	38,030,353 "

It will be observed that the expansion for the ten year period between 1902 and 1911 was equal to 406 per cent.

The following comparative statement of traffic will show on what canals the growth has taken place during the past four years :

	1908.	1909.	1910.	1911.
Sault Ste. Marie..	12,759,216	27,861,245	36,395,687	30,951,709
Welland.....	1,703,453	2,025,951	2,326,290	2,537,629
St. Lawrence.....	2,009,102	2,410,629	2,760,752	3,105,708
Chambly.....	503,276	752,117	669,299	599,829
St. Peter's	72,015	79,850	85,951	75,298
Murray.....	25,901	102,291	177,941	163,457
Ottawa	258,527	336,939	385,261	320,071
Rideau.....	89,640	91,774	134,881	172,227
Trent.....	81,690	59,952	46,263	57,290
St. Andrew's.....			8,283	47,135

Details of traffic, showing the tonnage of commodities, will be found in tables constituting the body of this report. Comparing the years 1910 and 1911, following was the tonnage by classes and canals:—

Canals.	Vegetable Products.	Animal Products.	Manu- factures.	Produce of Forest.	Produce of Mines.	Total.
1910.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sault Ste. Marie.....	2,530,396	304,729	862,526	100,613	32,597,423	36,395,687
Welland.....	982,346	60,880	516,333	154,737	611,994	2,326,290
St. Lawrence	856,611	83,754	497,007	564,328	759,052	2,760,752
Chambly.....	783	23,288	21,834	496,119	127,275	669,299
St. Peter's.....	4,603	14,867	7,889	10,124	48,468	85,951
Murray.....	20	4,544	162,506	3,471	7,400	177,941
Ottawa.....	723	8,111	72,294	268,199	35,934	385,261
Rideau.....	1,433	3,576	76,299	40,026	13,547	134,881
Trent.....	298	765	8,672	35,849	679	46,263
St. Andrew's.....	1	153	177	7,952	.....	8,283
Total.....	4,377,214	504,667	2,225,537	1,681,418	34,201,772	42,990,608
1911.						
Sault Ste. Marie.....	3,219,929	978	854,516	56,853	26,819,433	30,951,709
Welland.....	1,089,605	574	539,865	250,423	657,162	2,537,629
St. Lawrence.....	1,003,090	9,943	557,992	551,155	983,528	3,105,708
Chambly	41,903	315	25,370	396,704	135,537	599,829
St. Peter's.....	16,538	2,153	11,828	7,120	37,659	75,298
Murray.....	1,109	113	143,399	1,622	17,214	163,457
Ottawa.....	9,779	2,467	65,452	202,797	39,576	320,071
Rideau.....	6,084	2,684	114,937	34,350	14,172	172,227
Trent.....	951	397	12,551	31,342	12,049	57,290
St. Andrew's	82	33,153	13,773	127	47,135
Total.....	5,389,070	19,624	2,359,063	1,546,139	28,716,457	38,030,353

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The rates which each of the foregoing classes bore to the total volume of traffic during the past three years is shown in the following statement :—

	1909.	1910.	1911.
	Per cent.	Per cent.	Per cent.
Vegetable products.....	13·6	10·2	14·2
Animal ".....	1·5	1·2	·1
Manufactures.....	5·6	5·2	6·2
Produce of forests.....	4·9	3·9	4·0
Produce of mines.....	75·0	79·5	75·5

CANADIAN AND UNITED STATES TRAFFIC.

Prior to 1908 the statistical methods in use did not provide for a separation of Canadian and American business passing through the Canals. Since that date a record has been kept of the country of origin, and the facts with respect to the traffic of all the canals of the Dominion are given in the following tabular statement :—

Year.	Canadian Vessels.		U. S. Vessels.		Freight Tonnage.		
	No.	Tonnage.	No.	Tonnage.	Canadian.	United States.	Total.
1908	29,040	6,780,789	7,489	4,835,320	5,012,147	12,490,673	17,502,820
1909	22,507	7,811,578	9,996	16,459,322	7,378,057	26,342,691	33,720,748
1910.....	25,337	8,931,790	11,462	21,777,297	7,883,614	35,106,994	42,990,608
1911.....	25,585	9,172,192	10,370	18,231,622	7,792,907	30,237,446	38,030,353

It will be observed that of all the commodities transported through the canals of Canada in 1911, the proportion originating in the United States was 79·5 per cent. In 1910 the proportion was 81·6 per cent. This large difference in favour of the United States is almost wholly accounted for in the volume of ore passed through the canal at Sault Ste Marie.

With regard to vessel tonnage, the proportions in 1911 stood as follows :—Canadian, 33·5 per cent; United States 66·5 per cent.

TRANSPORTATION OF CANADIAN WHEAT.

With the development of the Western Provinces there has been a steady growth in the volume of waterborne wheat. Since 1895 the quantities annually brought down through the canal at Sault Ste Marie are shown in the following table :—

	Bushels.
1895.....	4,518,334
1896.....	19,314,234
1897.....	17,925,834
1898.....	9,746,600
1899.....	12,759,634
1900.....	9,292,034
1901.....	9,639,534
1902.....	27,912,500
1903.....	32,233,934
1904.....	29,794,100
1905.....	25,983,100
1906.....	34,389,300
1907.....	49,399,967
1908.....	58,574,034
1909.....	*48,047,833
1910.....	51,774,833
1911.....	63,641,000

*For the first time represents Canadian wheat only. The figures of preceding years include American wheat which passed through the Canadian Canal.

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The figures for the years anterior to 1909 include American wheat. It will be observed, however, that the increase in 1911 over 1909, applicable only to Canadian wheat, amounted to 15,593,167 bushels, or 32·4 per cent.

In addition to the 63,641,000 bushels of Canadian wheat which passed through the Canadian canal at Sault Ste. Marie, 1,981,481 bushels of Canadian wheat passed through the United States canal at that point. These figures combined show that the volume of water-borne Canadian wheat in 1911 was 65,622,481 bushels. Account is not taken of the relatively small quantity of wheat which was moved through any of the other canals. It is quite relevant, however, to point out that 183,449 barrels of Canadian flour were carried through the Canadian canal at Sault Ste. Marie in 1911, and 841,733 barrels of Canadian flour through the American canal. Calculating this Canadian flour into wheat, we have an addition of 4,100,728 bushels to the volume already indicated, bringing the total up to 69,723,209 bushels.

Last year, for the first time, a careful study was made of the distribution of Canadian wheat after it had passed through the canal at Sault Ste. Marie, and this year the same analytical methods have been applied to the traffic of 1911. Placing the figures for 1909, 1910 and 1911 side by side, for purposes of easy comparison, the record is as follows :

Canadian Wheat.	1909.	1910.	1911.
	Bushels.	Bushels.	Bushels.
Fort William to Montreal.....	10,517,266	13,185,370	12,761,666
" " " Georgian bay.....	13,384,400	12,753,200	9,881,234
" " " other Canadian ports.....	10,149,633	9,603,400	11,880,666
" " " Buffalo.....	12,841,334	15,693,363	27,945,600
Duluth to Montreal.....	520,000	315,000	.....
" " Buffalo.....	528,200	224,500	710,334
" " Georgian bay.....	28,000	.....	461,500
" " other Canadian ports.....	79,000	.....	.....
Total	48,047,833	51,774,833	63,641,000
Through American canal.....	9,117,328	5,321,446	1,981,481
Grand total.....	57,165,161	57,096,279	65,622,481

It should be explained, perhaps, that the ‘other Canadian ports’ indicated in the foregoing statement are ports west of Lake Erie, but not on the Georgian bay.

It is quite impracticable to follow the course of the small volume of Canadian wheat which passed through the American canal at Sault Ste. Marie. With respect to that which passed through the Canadian canal, however, the figures work out in the following percentages :—

	1909.	1910.	1911.
	Per cent.	Per cent.	Per cent.
Fort William to Montreal.....	21·9	25·5	20·1
" " " Georgian bay.....	27·9	24·6	15·6
" " " other Canadian ports.....	21·1	18·5	18·7
" " " Buffalo.....	26·7	30·3	43·8
Duluth to Canadian ports.....	1·3	·6	·7
" " American "	1·1	·5	1·1

It will be seen that 54·4 per cent of all the Canadian wheat which came down in 1911 through the Canadian canal at Sault Ste. Marie clung exclusively to Canadian

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channels. The proportion in 1910 was 68·6 per cent ; so that the diversion to American channels was considerably greater in 1911.

Of the 63,641,000 bushels of Canadian wheat which were transported through the Canadian canal at Sault Ste. Marie during the past year, 43·8 per cent went to Buffalo. Wheat is supposed to follow the channel offering the lowest freight rates, other things being equal. In this instance, however, distance and freight rates were substantially in favour of Montreal ; and yet other considerations caused nearly half of the wheat which came down last year from the Canadian west to find an outlet to the ocean through the port of Buffalo.

The course of the wheat trade during the month of November, 1911, may be taken as illustrating the situation. In that month 18,021,300 bushels of Canadian wheat were passed through the Canadian canal at Sault Ste. Marie, or nearly one-third of the total volume for the year. The all-water freight rate from Fort William to Montreal in November was 4½ cents per bushel. The water rate from Fort William to Buffalo was 3½ cents per bushel, plus 5½ cents by rail from Buffalo to New York. Montreal and New York are the essential points of comparison. Thus in November the freight rate from Fort William to Montreal was 4½ cents, as compared with 9 cents to New York. This would seem to establish a controlling advantage in favour of Montreal, and, other things being equal, it would be ; yet in that month 48·3 per cent of all the Canadian wheat which came down from the west, including that which passed through the American canal, went out by way of Buffalo-New York.

Careful inquiries were made as to the conditions which operated in November last, and which in some degree operate in all seasons, as a countervail to the lake freight rates in favour of Montreal. They were ascertained to be : First, availability of ocean tonnage at New York ; second, lower ocean rates between New York and foreign ports ; and third, lower ocean insurance rates from New York. These factors were obviously sufficient to divert, in November last, nearly half of all the Canadian wheat from the west into American channels.

November is the rush month in the wheat trade. Market considerations may, under such circumstances, rise above the immediate question of rates. Delivery at a foreign port within a specified time may depend upon the choice of the dearest available channel, rather than the cheapest, and it is probable that this very situation caused the diversion of millions of bushels from the port of Montreal in 1911. Under such conditions, mere uncertainty as to ocean tonnage may turn the scale.

Marine insurance rates remained unchanged during the year. In November they ran from 65 cents to \$1.10 per \$100 from Montreal, as compared with 12½ to 15 cents from New York.

FREIGHT RATES BY WATER.

This department has very frequently been asked the question: What are the transportation rates per ton per mile on the canals of Canada ? It has always been impossible to give an answer. The information upon which to base an accurate calculation, so as to make, for example, a comparison between freight rates by water and freight rates by rail, has never been available. Carriers by water have not at any time been asked to disclose their freight charges. There is no good reason, however, why they should not be. Such carriers enjoy rather extraordinary privileges, and the whole question of transportation rates by land and water is manifestly of deep public interest. Railway corporations are required by law to give an exceedingly analytical statement of their operations, and carriers by water should at least be asked to give such information as will enable the important question of freight rates to be definitely determined. Acting upon your instructions, I propose to inaugurate for the season of 1912 such changes in our statistical methods as will fully and definitely ascertain the freight charges per ton per mile by vessels operating on the inland waters of the Dominion.

Meanwhile, careful study has been given to the data in hand in order to estimate the rate per ton per mile charged by carriers using the canals of Canada. For this

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purpose three factors are required: First, the number of tons moved; second, the length of the haul in miles; and third, the freight charges. Not one of them is definitely available at present. It is not known, for example, how many tons were transported through the canals. It is accurately known how many tons passed through each particular canal; but it has been found impracticable under the system which has long been in vogue to prevent some measure of duplication in making up the total. Under the methods to be adopted hereafter the tonnage will be absolutely accurate. The length of the haul in each instance has not been made a matter of record up to this moment. That will be corrected hereafter. The schedules in use have not taken cognizance of freight rates, and that, too, will be taken care of in the plan to be given effect in 1912.

In this situation, it has been found necessary to select one of the gateways of our inland water system, and apply certain tests to the traffic flowing through it. The Welland canal was chosen. All through business between the lower and upper lakes, moving up or down, must pass that point. Here, then, we have our first factor—the volume of traffic. The total number of tons which passed through the Welland canal during the calendar year 1912 was 2,537,629. Of this aggregate, 842,919 tons were moved up, or westward; while 1,694,710 tons were moved down, or eastward. The relative proportions were 34 per cent and 66 per cent respectively. It is assumed that all the business which passed through the Welland canal was moved the whole distance between Montreal and Fort William—1,223 miles—or vice versa. This gives us our second factor—the length of the haul.

In an effort to ascertain the freight charges which prevailed in 1911, it was found that the rate on only one commodity, wheat, was definitely known. That rate is put down at \$1.50 per ton for carriage between Fort William and Montreal. It is probably the lowest rate at which any commodity is carried through the canals. Now, the total volume of wheat transported through the Welland canal in 1911 was 562,282 tons, or a little over 22 per cent of the total volume of traffic. On reference to the table relating to the Welland canal, it will be observed, for example, that among the 32 commodities moved, there were 187,411 tons of general merchandise, on which a rate two or three times as high as \$1.50 per ton was probably charged. Having regard to the whole list, it is thought fair to assume, for the purposes of this estimate, that an average rate of at least \$2 per ton was levied. This is probably a low figure, in view of the fact that the average rate on the Erie canal in the last year for which information was obtainable, was equal to \$2.45 per ton for the distance between Fort William and Montreal; and the Erie canal is a barge canal, which provides the cheapest known form of transportation by water. This, then, gives us our third factor—the freight charge.

It will be seen that 2,537,629 tons carried 1,223 miles, would be equal to 3,103,520,267 tons carried one mile. The freight bill on 2,537,629 tons, at \$2 per ton, would be \$5,075,258. Dividing the ton miles into the freight earnings, we have the quotient of .163 cent per ton per mile. The rail rate from Fort William to Montreal on wheat is \$4 per ton, or .421 cent per mile, so that the water rate is, by comparison, quite low. But in comparing the rail and water rate between those two points, it must be remembered that the railway has to maintain its right-of-way, pay interest on capital invested, and meet all incidental operating expenses. In the case of transportation by water, Government keeps up the right of way, pays the cost of operating the canals, and makes no charge of any kind to the vessel owner or shipper. The question at once suggested is: What is the contribution of Government toward the reduction of the freight rate by water?

To answer this question, the first item to be taken into account is interest on capital invested. Without going into details, let it be said that Government has expended \$80,000,000 in constructing the canals between Fort William and Montreal, and in providing otherwise for the navigation of that chain of waterways. In this sum of \$80,000,000 is not included the very considerable cost of harbours and lighthouses. It represents practically the direct cost of the canal system by itself. The interest charges on that capital outlay, at $3\frac{1}{2}$ per cent, would amount to \$2,800,000 per annum. This would be equal to a contribution of .090 per ton per mile on account of interest on

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capital. To this must be added the expenditure for maintenance and operation, which represents an average of \$1,400,000 per annum. The contribution of Government on that account is equal to .045 per ton per mile. The account would thus stand, per ton per mile, as follows:—

Freight charges. ....	.163 cent.
Government contribution, interest.....	.090 "
" " maintenance, &c. ....	.045 "
<hr/>	
Total	.298 cent.

I am quite confident that when all the facts are positively ascertained for the current year, 1912, it will be found that the foregoing estimate is quite too low. It is below the results on the Erie Canal, in the State of New York, and not more than about one third of the rate per ton per mile charged by the canals of Europe. However that may be, it will be observed that the contribution of Government in 1911 was equal to .135 cent per ton per mile, or 83 per cent of the freight rate charged by vessel owners.

There is still another important and vital aspect of this matter. Of the 2,537,629 tons of freight which passed through the Welland Canal in 1911, only 1,296,480 tons, or 51 per cent of the whole, consisted of Canadian products. The remaining 49 per cent was composed of commodities of the United States, most of which passed from an American port to an American port. This would not in any way affect the freight rate; but it may be worth while to show what was the contribution of Government toward the transportation of exclusively Canadian business through the canals between Fort William and Montreal in 1911. The number of tons carried one mile in that case would be 1,585,595,040. Without going into the details of the calculation, as was done in a preceding paragraph, let it be said that on Canadian traffic only the account per ton per mile would stand as follows:—

Freight charges.....	.163 cent.
Government contribution, interest.....	.177 "
" " maintenance, &c. ....	.088 "
<hr/>	
Total	.428 cent.

It will be seen that the Government contribution amounted to .265 cent per ton per mile, as compared with .163 charged by the vessel owners. Of course, as has been said, the actual freight rate is probably higher than .163 per ton mile. Be that as it may, the calculation which has been made shows the probable freight rate by water, between Fort William and Montreal, to be slightly higher than the actual rate by rail between those points.

GENERAL STATISTICS.

Detailed information by canals, relating to both tonnage and commodities, will be found in tables constituting the body of this report.

The following digests of statistical data will be found helpful and instructive:

STATEMENT of total Freight passed through the Canals for the following years.

YEARS.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1887	336,648	1,154,424	138,692	202,563	151,805	192,528	86,374	457,482	713,519	2,006,997	2,720,516
1888	355,165	1,146,260	138,127	174,239	214,407	223,429	81,611	428,357	789,310	1,972,287	2,761,697
1889	384,777	1,156,306	122,295	198,497	267,224	300,193	81,243	603,311	855,529	2,258,367	3,113,896
1890	369,593	1,137,011	144,368	133,188	216,813	320,324	58,709	533,021	789,505	2,123,542	2,913,047
1891	370,120	1,155,247	103,814	123,193	248,188	307,958	50,747	543,259	772,869	2,129,657	2,902,526
1892	327,500	1,322,137	173,638	135,787	241,034	302,983	47,396	481,301	789,528	2,242,208	3,031,736
1893	351,706	1,344,822	214,076	141,602	247,329	385,769	54,912	806,773	868,023	2,678,966	3,546,989
1894	299,155	1,140,606	204,175	89,614	231,172	363,107	46,020	568,866	780,522	2,162,193	2,942,715
1895	264,824	1,070,046	286,191	91,177	362,637	608,778	62,285	590,140	975,937	2,360,141	*3,336,078
1896	293,353	1,619,688	259,659	100,519	1,197,245	3,536,054	117,535	867,040	1,867,792	6,123,281	7,991,073
1897	275,587	1,713,274	268,700	187,960	669,142	4,369,314	108,787	968,203	1,322,216	7,238,751	8,560,967
1898	263,989	1,819,887	187,253	98,967	929,508	2,425,121	81,615	912,135	1,362,365	5,256,110	6,618,475
1899	296,208	1,833,412	266,364	115,133	732,030	2,129,988	125,678	727,111	1,420,280	4,805,644	6,225,924
1900	312,201	1,632,915	270,033	81,714	568,197	1,339,915	105,155	703,563	1,255,586	3,758,107	5,013,693
1901	340,805	1,686,094	268,449	201,231	507,204	1,801,696	177,715	682,065	1,294,173	4,371,086	5,665,239
1902	529,985	2,064,480	308,212	342,484	515,828	3,000,636	190,243	562,229	1,543,368	5,969,829	7,513,197
1903	648,150	2,391,366	430,174	408,500	863,337	3,130,816	373,456	958,018	2,315,117	6,888,700	9,203,817
1904	606,737	2,047,499	511,887	276,578	699,784	2,778,903	483,795	851,053	2,302,203	5,954,033	8,256,236
1905	736,976	2,252,514	549,365	347,089	607,228	3,183,895	577,528	1,137,146	2,451,097	6,920,647	9,371,744
1906	1,238,929	2,355,855	627,094	234,919	991,508	3,595,256	482,239	997,385	3,339,770	7,183,415	10,523,185
1907	1,034,733	3,162,158	891,692	226,138	1,991,959	11,060,878	819,369	1,356,712	4,737,753	15,805,886	20,543,639
1908	1,928,246	3,292,422	560,736	278,721	1,704,310	8,218,866	972,300	1,447,219	4,265,592	13,237,228	17,502,820
1909	1,608,659	3,504,849	1,060,715	607,894	1,985,522	22,385,226	1,023,829	1,544,054	5,744,349	27,976,399	33,720,748
1910	2,312,740	3,861,272	600,144	661,436	3,323,822	29,530,163	995,749	1,705,282	7,232,455	35,758,153	42,990,608
1911	2,370,516	3,910,558	572,470	995,719	2,546,677	23,458,256	2,086,777	2,089,380	7,576,440	30,453,913	38,030,353

* Sault Ste. Marie canal opened in August, 1895.

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STATEMENT of the Tonnage of Canadian and United States Vessels for the following years :—

CANADIAN VESSELS.

YEARS.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.	Number of Vessels.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up and Down.			
1887.	1,201,529	1,194,665	162,554	36,277	1,071	65	30,778	221,013	1,395,932	1,452,020	2,847,952	18,991
1888.	1,113,290	1,120,774	158,209	34,368	1,252	.....	22,553	189,876	1,295,304	1,345,018	2,640,322	17,661
1889.	1,285,574	1,207,892	188,131	39,371	976	802	20,271	252,565	1,494,952	1,500,630	2,995,582	19,393
1890.	1,314,127	1,250,999	229,478	32,909	929	351	14,003	296,676	1,558,537	1,580,935	3,139,472	20,655
1891.	1,356,518	1,287,168	201,758	28,642	550	292	16,350	244,176	1,575,176	1,560,278	3,135,454	19,246
1892.	1,517,249	1,460,505	177,136	29,184	1,466	394	14,659	291,374	1,710,510	1,691,455	3,401,965	21,177
1893.	1,548,094	1,422,326	170,186	26,787	1,172	10	17,037	248,442	1,736,489	1,697,565	3,434,054	20,757
1894.	1,319,792	1,260,907	217,635	19,298	2,177	5	6,394	222,696	1,545,998	1,502,906	3,048,904	19,027
1895.	1,258,848	1,165,683	253,693	13,383	.....	.....	5,899	285,553	1,518,440	1,464,619	2,983,059	17,136
1896.	1,547,757	1,420,342	200,292	5,234	157	.....	4,115	271,809	1,752,321	1,697,385	3,449,706	20,972
1897.	1,629,192	1,482,951	215,785	11,378	.....	.....	3,533	297,898	1,848,510	1,792,227	3,640,737	21,466
1898.	1,704,661	1,609,255	215,393	4,927	499	518	6,805	255,927	1,927,358	1,870,627	3,797,985	21,509
1899.	1,865,643	1,774,789	242,817	32,436	925	3,691	42,290	345,980	2,151,675	2,156,896	4,308,571	23,579
1900.	1,767,293	1,681,340	265,926	14,922	2,909	64	38,015	358,781	2,074,143	2,055,107	4,129,250	21,755
1901.	1,615,952	1,587,221	279,007	82,541	3,300	2,908	97,332	312,003	1,995,591	1,984,673	3,980,264	20,860
1902.	1,914,167	1,840,787	241,356	97,492	1,874	2,164	101,335	286,520	2,258,732	2,226,963	4,485,695	22,198
1903.	2,061,258	2,088,969	340,383	143,614	7,018	3,082	188,896	379,612	2,597,555	2,615,277	5,212,832	23,767
1904.	1,838,260	1,907,886	299,245	159,740	5,175	4,223	237,910	319,661	2,380,590	2,391,510	4,772,100	21,851
1905.	2,059,097	2,031,766	312,773	188,138	11,820	3,191	262,401	322,005	2,646,091	2,545,100	5,191,191	23,726
1906.	2,271,776	2,264,476	292,705	155,595	24,420	5,506	202,276	309,567	2,791,177	2,735,144	5,526,321	25,498
1907.	2,561,948	2,661,317	337,822	129,246	9,153	7,331	238,172	383,922	3,147,095	3,181,816	6,328,911	28,833
1908.	2,726,776	2,748,139	318,327	227,315	5,057	7,844	348,944	398,387	3,399,104	3,381,685	6,780,789	29,040
1909.	3,335,187	2,992,403	300,320	217,989	82,591	111,236	257,945	513,907	3,976,043	3,835,535	7,811,578	22,507
1910.	3,891,613	3,504,463	315,656	122,688	95,151	89,618	287,555	627,046	4,587,975	4,343,815	8,931,790	25,337
1911.	3,997,073	3,646,516	333,500	176,690	8,499	2,332	393,012	614,570	4,732,084	4,440,108	9,172,192	25,585

STATEMENT of the Tonnage of Canadian and United States Vessels for the following years :—

UNITED STATES VESSELS.

YEARS.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.	TOTAL TONS.	Number of Vessels.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.			
1887	16,265	17,925	38,857	56,708	143,730	140,562	52,793	98,849	251,645	566,680	3,883
1888	14,304	26,801	42,425	50,047	177,714	156,095	49,778	114,613	284,221	631,777	3,921
1889	21,125	26,449	55,996	50,732	253,088	206,567	56,249	160,442	386,458	830,648	4,542
1890	10,390	16,345	38,156	36,397	248,418	234,728	39,697	97,266	336,661	721,397	3,364
1891	10,357	20,851	70,665	27,727	283,013	238,818	31,083	146,602	395,118	838,116	3,602
1892	12,023	20,405	88,221	22,763	280,315	229,437	37,037	172,594	417,596	871,795	3,928
1893	10,752	34,303	214,047	33,741	351,994	282,724	50,994	307,740	627,787	1,286,295	4,585
1894	18,528	20,201	139,720	20,830	302,562	269,788	37,406	192,992	498,216	1,012,027	4,131
1895	8,838	24,768	138,554	17,712	262,240	216,542	32,295	185,730	441,927	886,679	4,427
1896	11,496	19,093	195,228	21,953	357,205	292,359	10,416	290,370	604,345	1,228,120	4,650
1897	14,666	18,367	269,430	17,618	338,938	277,345	26,341	347,698	649,375	1,310,403	4,675
1898	12,142	9,541	233,624	32,880	308,878	305,464	32,331	336,004	586,875	1,270,764	4,264
1899	17,217	18,044	172,897	30,002	1,605,887	1,156,503	51,902	234,336	1,846,848	3,285,733	6,101
1900	13,316	17,824	157,689	30,443	1,208,725	744,276	45,741	190,971	1,425,471	2,408,985	5,502
1901	11,587	18,706	177,169	28,124	922,464	1,044,707	54,895	224,622	1,166,115	2,482,274	5,634
1902	13,622	37,871	187,826	70,641	1,756,948	1,654,672	123,257	241,602	2,081,653	4,086,439	6,433
1903	14,014	24,168	265,208	65,247	1,736,187	1,689,414	106,401	335,836	2,121,810	4,236,475	6,695
1904	10,122	16,890	275,721	39,993	1,464,316	1,475,085	68,081	305,697	1,818,240	3,655,905	6,253
1905	19,743	19,444	364,985	81,876	2,350,494	1,701,704	101,536	456,459	2,836,758	5,096,241	7,085
1906	34,306	15,324	356,259	78,561	2,738,623	1,928,131	115,675	418,436	3,244,863	5,685,315	7,319
1907	57,349	72,018	304,591	72,048	4,730,053	5,376,060	205,769	623,941	5,463,767	11,604,834	9,328
1908	54,587	32,705	442,773	124,120	2,975,624	4,142,392	218,835	536,103	3,685,819	8,521,139	7,489
1909	263,592	109,407	442,176	200,202	4,178,378	10,429,314	213,750	621,903	5,098,196	16,459,322	9,996
1910	119,222	50,498	428,702	305,330	5,509,417	14,488,565	299,462	576,101	6,356,803	21,777,297	11,462
1911	49,778	12,643	626,897	576,313	3,348,936	12,057,484	709,084	850,487	4,734,695	18,231,622	10,370

Vessel and Freight Tonnage passed through the Sault Ste. Marie Canal:—

SESSIONAL PAPER No. 20a

Years.	CANADIAN VESSELS.		U. S. VESSELS.		Total No.	Vessel Tonnage.	FREIGHT TONNAGE.		LOCKAGES.		Remarks.
	No.	Tonnage.	No.	Tonnage.			Canadian.	United States.	Total.	No.	No.
1895.	609	126,534	583	623,092	1,192	749,626	.....	.....	595,837	609	87 Canal first operated Sept. 9, 1895.
1896	2,070	589,407	3,066	3,805,749	5,136	4,395,156	.....	.....	4,577,399	3,042	218
1897	1,909	495,546	2,359	3,391,936	4,268	3,797,482	.....	.....	4,947,065	2,604	238
1898	1,811	403,931	1,864	2,353,699	3,675	2,757,630	.....	.....	3,055,387	2,520	243
1899	2,000	558,552	1,769	2,389,457	3,769	2,948,009	.....	.....	3,006,664	2,610	239
1900	1,790	577,310	1,201	1,617,438	3,081	2,194,748	.....	.....	2,035,677	2,205	238
1901	2,796	775,151	1,408	1,674,597	4,204	2,449,748	.....	.....	2,820,394	2,910	246
1902	3,080	1,366,930	1,964	3,237,372	5,044	4,604,302	.....	.....	4,729,268	3,418	264
1903	2,711	1,615,939	1,640	3,146,807	4,351	4,762,746	.....	.....	5,511,868	3,242	256
1904	2,637	1,555,042	1,325	2,675,663	3,962	4,230,705	.....	.....	5,030,705	3,022	241
1905	3,970	1,803,288	1,692	3,734,349	5,662	5,537,637	.....	.....	5,473,406	4,031	255
1906	3,922	1,959,252	1,758	4,399,872	5,680	6,359,124	.....	.....	6,574,939	4,152	253
1907	3,217	2,154,688	3,132	9,961,281	6,349	12,115,969	.....	.....	15,588,165	4,596	238
1908	3,289	2,603,232	2,204	7,035,655	5,493	9,638,887	2,092,231	10,666,985	12,759,216	3,667	255 Origin of cargo first shown.
1909	2,597	2,988,936	3,734	14,850,738	6,331	17,839,674	3,366,495	24,494,750	27,861,245	5,046	240
1910	2,744	3,173,494	5,228	20,187,704	7,972	23,361,198	3,345,619	33,050,068	36,395,687	6,110	248
1911	2,713	3,108,880	4,068	16,252,340	6,781	19,361,220	3,177,581	27,774,128	30,951,709	6,802	236

CAPITAL EXPENDITURE.

The statement following brings the capital expenditure on the canals of the Dominion down to March 31, 1911. It must be understood, however, that the total shown is apart from the outlay by the Imperial Government on the Carillon and Grenville canal, as to which the records were lost in the destruction by the fire of the Ordnance Office, Montreal, in 1852. The details are as follows :—

Canal.	Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Beauharnois.....	1,636,690 26		1,636,690 26
Carillon and Grenville.....	63,053 64	4,119,039 32	4,182,092 96
Chambly.....	637,214 66	63,786 47	701,001 13
Cornwall.....	1,945,624 73	5,289,142 41	7,234,767 14
Culbute.....	382,776 46		382,776 46
Lachine.....	2,589,532 85	10,039,277 20	12,628,810 05
Lake St. Francis.....		75,906 71	75,906 71
Lake St. Louis.....		298,176 11	298,176 11
Murray.....	1,248,946 71		1,248,946 71
Rideau.....	4,085,889 21		4,085,889 21
Sault Ste. Marie.....	4,923,329 97		4,923,329 97
Soulanges.....	7,228,835 30		7,228,835 30
Ste. Anne's.....	134,456 51	1,035,759 12	1,170,215 63
St. Lawrence River and Canals.....	18,442 85	3,451,470 56	3,469,913 41
St. Ours.....	121,537 65		121,537 65
St. Peter's.....	648,547 14		648,547 14
Tav.....	489,599 23		489,599 23
Trent.....	9,555,950 41		9,555,950 41
Welland...	7,693,824 03	21,049,468 96	28,743,292 99
Williamsburg { Farran's Point.....		877,090 57	
{ Galops.....		6,118,927 32	
{ Rapide Plat.....		2,158,242 00	
{ Williamsburg.....	1,320,655 54	10,696 26	10,485,611 69
Total ..	44,724,907 15	54,586,983 01	99,311,890 16

The cost of maintenance during the fiscal year 1911 was \$1,526,503.56.

I have the honour to be, sir,
Your obedient servant,

J. L. PAYNE,
Comptroller of Statistics.

CANAL STATISTICS

FOR

SEASON OF NAVIGATION, 1911

GRAIN PASSED DOWN WELLAND.

The quantity of barley, corn, oats, pease, rye and wheat passed down the Welland canal, from ports west of Port Colborne for a period of thirty years is as follows :—

QUANTITY PASSED DOWN TO MONTREAL.		To Ports in Ontario.	Quantity from U. S. Ports to U. S. Ports.
	Tons.	Tons.	Tons.
1882.....	180,694	.....	63,881
1883.....	186,814	10,650	121,876
1884.....	142,194	12,153	104,537
1885.....	96,569	11,909	117,346
1886.....	203,940	9,881	151,551
1887.....	185,034	11,838	134,868
1888.....	160,358	25,599	169,664
1889.....	267,769	19,075	213,766
1890.....	288,513	16,899	245,932
1891.....	295,509	6,805	202,710
1892.....	261,954	8,942	201,540
1893.....	501,806	25,555	222,958
1894.....	273,651	16,699	203,979
1895.....	231,491	32,096	133,823
1896.....	461,049	73,386	160,372
1897.....	* 560,254	53,257	157,756
1898.....	519,532	31,279	144,612
1899.....	332,746	40,197	68,011
1900.....	244,661	17,525	84,589
1901.....	151,566	13,732	83,370
1902.....	208,215	22,787	81,164
1903.....	351,936	29,062	111,828
1904.....	198,246	23,711	102,523
1905.....	341,431	42,061	129,270
1906.....	404,935	33,351	176,119
1907.....	635,573	42,032	163,295
1908.....	756,141	38,142	135,172
1909.....	652,742	40,238	129,587
1910.....	789,661	63,657	115,457
1911.....	836,924	51,560	121,655

During the last decade the quantity of agricultural products as above, passed down the Welland and St. Lawrence canals to Montreal, has increased from 208,215 tons in 1902 to 836.924 tons in 1911, and the quantity passed down the Welland canal from United States ports to United States, has increased from 81,164 to 121,655 tons the same years.

2 GEORGE V., A. 1912

The quantity of barley, buckwheat, corn, oats, pease, rye and wheat, arrived at Montreal via Grand Trunk and Canadian Pacific Railways for a period of 14 years, is reported as follows:—

Year.	Tons.
1898	293,391
1899	209,170
1900	229,624
1901	227,700
1902	263,861
1903	253,959
1904	154,625
1905	148,377
1906	386,963
1907	383,735
1908	285,262
1909	426,163
1910	
1911	241,134

The quantity of the same articles passed down the whole length of the St. Lawrence canals to Montreal for the same period was:—

Year.	Tons.
1898	575,097
1899	372,291
1900	295,928
1901	203,316
1902	242,225
1903	400,057
1904	220,076
1905	375,630
1906	449,673
1907	684,697
1908	776,374
1909	652,742
1910	789,661
1911	836,924

Comparative shipments of grain by the St. Lawrence route, and railways, are as follows:—

QUANTITY OF GRAIN TO SEA BOARD BY COMPETING ROUTES.

The quantity of grain and pease passed down the whole length of the St. Lawrence canal to Montreal, is as follows:—

	Tons.
For 1910	789,661
1911	836,924
Showing an increase of	47,263

The quantity of grain and pease carried to Montreal via Canadian Pacific and Grand Trunk Railways is reported as follows:—

For 1910	275,596
1911	241,134
Showing a decrease of	34,462

The quantity of grain passed down the Welland canal in Canadian and United States vessels to Kingston and Prescott for fifteen years is as follows:—

[illegible]

	Tons.
1897, 197 cargoes, with an aggregate quantity of	285,847
1898, 339 " "	464,852
1899, 167 " "	205,571
1900, 239 " "	163,675
1901, 135 " "	123,229
1902, 135 " "	136,652
1903, 219 " "	273,986
1904, 118 " "	150,359
1905, 235 " "	273,344
1906, 178 " "	269,800
1907, 263 " "	413,087
1908, 271 " "	330,514
1909, 174 " "	272,291
1910, 182 " "	295,714
1911, 173 " "	281,916

One hundred and sixty-two Canadian and 49 American vessels took cargoes of 343,733 tons through to Montreal intact in 1908; 87 Canadian and 9 American of 135,582 in 1907; 74 Canadian and 10 American of 108,734 tons in 1906; 96 Canadian and 18 American of 180,206 in 1905; 56 Canadian and 16 American of 116,095 tons in 1904; 56 Canadian and 18 American of 99,582 tons in 1903; 19 Canadian and 17 American of 34,804 tons in 1902; 23 Canadian and 2 American of 17,303 tons in 1901, 15 of 7,924 tons in 1900, 2 of 558 tons in 1899, 7 of 2,426 in 1898, 7 of 2,324 in 1897, 3 of 1,176 in 1896, 4 of 1,344 tons in 1905, 2 cargoes of 810 tons in 1894, none in 1893, 2 in 1892 of 924 tons, and 3 in 1891 of 1,441 tons. Three vessels lightened a portion of their cargoes in 1901, 9 in 1900, 11 in 1899, 25 in 1898, 11 in 1897, 16 in 1896, 6 in 1895, 19 in 1894, 34 in 1893, 25 in 1892, and 44 in 1891; 222 vessels discharged the whole of their cargoes at Kingston in 1901, 540 in 1900, 316 in 1899, 473 in 1898, 359 in 1897, 335 in 1896, 169 in 1895, 188 in 1894, 369 in 1893, 220 in 1892, and 293 in 1891.

2 GEORGE V., A. 1912

The quantity of grain transhipped at Port Colborne in 1909 and the four previous years was as follows:

Articles.	1905.	1906.	1907.	1908.	1909.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Wheat	679,840	1,009,474	1,428,300	1,106,244	2,686,963
Corn	104,027	110,629	112,036		
Rye					
Oats		29,118	30,824	23,945	
Barley		2,103		56,544	22,216
Flaxseed			39,040	49,628	8,202

WELLAND CANAL.

The total quantity of freight passed on the Welland canal during the season of 1911 was 2,537,629 tons; of this quantity 27,898 tons was way or local freight.

There were 1,694,710 tons of freight passed eastward, and 842,919 passed westward.

East and West bound Through Freight.

The total quantity of through freight passed through the whole length of the Welland canal during the season of 1911 was 2,509,731.

Of this quantity 1,682,531 tons were east bound and 827,200 west bound freight.

Of the east bound through freight, Canadian vessels carried 1,206,583 tons and United States vessels carried 475,948 tons; and of the west bound through freight Canadian vessels carried 397,739 tons and United States vessels carried 429,461 tons, or a total of 1,604,322 tons for Canadian and 905,409 tons for American vessels.

ST. LAWRENCE CANALS.

The total quantity of freight passed through these canals during 1911 was 3,105,708 tons; of this quantity 2,146,748 tons passed eastward and 958,960 passed westward.

East and West bound Through Freight.

The total quantity of through freight was 2,326,729 tons; of this quantity 1,792,446 tons were east bound and 534,283 tons were west bound.

Way Freight.

Of the total quantity of (way) or local freight 354,302 were east bound and 424,677 tons west bound freight.

SESSIONAL PAPER No. 20a

THROUGH TRAFFIC BETWEEN MONTREAL AND PORTS ON LAKE ERIE, MICHIGAN, ETC.

The total quantity of through freights passed eastward from Lake Erie and westward from Montreal through the Welland and St. Lawrence canals, during fifteen years, was as follows:—

Year.	Eastward, to Montreal.	Westward, from Montreal.
	Tons.	Tons.
1897.....	584,246	4,542
1898.....	538,108	4,436
1899.....	354,933	5,991
1900.....	288,251	6,217
1901.....	184,420	13,714
1902.....	250,475	25,289
1903.....	390,786	100,699
1904.....	278,328	71,512
1905.....	448,704	72,482
1906.....	554,231	96,791
1907.....	789,167	1,281
1908.....	864,926	3,472
1909.....	925,005	191,510
1910.....	1,170,139	172,360
1911.....	1,291,973	233,335

THROUGH FREIGHT FROM UNITED STATES PORTS TO UNITED STATES PORTS.

The total quantity of through freight passed eastward and westward through the Welland canal, from United States ports to United States ports, for a period of fifteen years, was as follows:—

Year.	Eastward.	Westward.	Total.
	Tons.	Tons.	Tons.
1897.....	353,863	210,831	564,694
1898.....	277,023	210,516	487,539
1899.....	225,491	135,038	360,529
1900.....	218,969	99,560	318,529
1901.....	190,476	83,543	274,019
1902.....	224,110	44,919	269,029
1903.....	221,074	149,151	370,225
1904.....	165,337	87,144	252,481
1905.....	190,547	112,549	303,096
1906.....	237,226	84,205	321,431
1907.....	218,997	177,660	396,657
1908.....	209,518	239,136	448,654
1909.....	196,838	248,581	445,419
1910.....	197,301	288,198	485,499
1911.....	175,752	309,603	485,355

The total quantity of freight passed through the Welland canal from United States ports to United States ports shows a decrease of 144 tons as compared with the previous year; and a decrease of 79,339 tons as compared with 1897.

The following statement shows the aggregate number of vessels and the total quantity of freight passed through the Welland canal, and the quantity passed between United States ports during the years 1867 to 1911 inclusive.

Fiscal Year.	Aggregate number of Trips.	Total quantity transported on the Welland canal.	Quantity passed from United States ports to United States ports.
	No.	Tons.	Tons.
1867..	5,405	933,260	458,386
1868..	6,157	1,161,821	641,711
1869..	6,069	1,231,903	688,700
1870..	7,356	1,311,956	747,567
1871..	7,729	1,478,122	772,756
Season of Navigation.			
1872..	6,063	1,333,104	606,627
1873..	6,425	1,506,484	656,208
1874..	5,814	1,389,173	748,557
1875..	4,242	1,038,050	477,809
1876..	4,789	1,099,810	488,815
1877..	5,129	1,175,398	493,841
1878..	4,429	968,758	373,738
1879..	3,960	865,664	284,043
1880..	4,104	819,934	179,605
1881..	3,332	686,506	194,173
1882..	3,334	790,643	282,806
1883..	3,267	1,005,156	432,611
1884..	3,138	837,811	407,079
1885..	2,738	784,928	384,509
1886..	3,589	980,135	464,478
1887..	2,785	777,918	340,501
1888..	2,647	878,800	434,753
1889..	2,975	1,085,273	563,584
1890..	2,883	1,016,165	533,957
1891..	2,594	975,013	553,800
1892..	2,615	955,554	541,065
1893..	2,843	1,294,823	631,667
1894..	2,412	1,008,221	592,267
1895..	2,222	869,595	469,779
1896..	2,766	1,279,987	653,213
1897..	2,725	1,274,292	564,694
1898..	2,384	1,140,077	487,539
1899..	2,202	789,770	360,529
1900..	2,399	719,360	318,529
1901..	1,547	620,209	274,019
1902..	1,568	665,387	269,029
1903..	1,787	1,002,919	370,225
1904..	1,433	811,371	252,481
1905..	1,595	1,092,050	305,096
1906..	1,536	1,201,967	321,431
1907..	1,982	1,614,132	396,743
1908..	2,351	1,703,453	448,654
1909..	2,433	2,025,951	445,419
1910..	2,544	2,326,290	487,499
1911..	2,480	2,537,629	485,355

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The total quantity of freight passed through the several divisions of the Canadian canal system during the season of 1911 is as follows :

	Farm Stock.	Forest Produce of Wood.	Manufac- tures.	Products of Mines.	Agricultural Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sault Ste. Marie.	978	56,853	854,516	26,819,433	3,219,929	30,951,709
Welland.	574	250,423	539,865	657,162	1,089,605	2,537,629
St. Lawrence	9,943	551,155	557,992	983,528	1,003,090	3,105,708
Chambly.	315	396,704	25,370	135,537	41,903	599,829
St. Peter's	2,153	7,120	11,828	37,659	16,538	75,298
Murray.	113	1,622	143,399	17,214	1,109	163,457
Ottawa	2,467	202,797	65,452	39,576	9,779	320,071
Rideau	2,684	34,350	114,937	14,172	6,084	172,227
Trent.	397	31,342	12,551	12,049	951	57,290
St. Andrew's		13,773	33,153	127	82	47,135

The total quantity of freight moved on the Welland canal was 2,537,629 tons, of which 1,089,605 tons were agricultural products.

On the St. Lawrence canals the total quantity of freight moved was 3,105,708 tons, of which 1,003,090 were agricultural products, and 557,992 tons were manufactures.

On the Ottawa canals the total quantity of freight moved was 320,071 tons ; of this quantity 202,797 tons were the produce of the forest.

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COMPARATIVE STATEMENT of the Commerce through the United States, St. Mary's Falls canals and the Canadian Sault Ste. Marie canal; for the Seasons of 1910 and 1911.

	Traffic for 1911		Total traffic for		Increase.	Decrease.
	United States canal.	Canadian canal.	Season of 1911.	Season of 1910	Amount.	Amount.
Vessels.....number	11,870	6,802	18,672	20,899	.....	2,227
Lockages....."	8,064	5,229	13,293	14,569	.....	1,276
Tonnage, registered....net tons	22,321,519	19,361,220	41,682,739	49,868,184	.....	8,185,445
" freight....."	22,523,551	30,951,709	53,475,260	62,323,348	...	8,848,088
Passengers.....number	40,245	39,044	79,289	66,827	12,462	.....
Coal, hard.....net tons	1,613,347	433,859	2,047,206	1,710,741	336,465	.....
" soft....."	9,555,380	3,673,094	13,228,474	11,827,429	1,401,045	.....
Flour.....barrels	4,754,433	2,518,000	7,272,433	7,688,016	.....	415,583
Wheat.....bushels	17,188,795	80,038,100	97,226,895	85,902,249	11,324,646	.....
Grain (excluding wheat).."	12,609,941	25,104,883	37,714,824	38,801,037	.....	1,086,213
Manufactured and pig iron.....net tons	194,907	204,914	399,821	485,668	...	85,847
Salt.....barrels	525,180	95,851	621,031	528,610	92,421	...
Copper.....net tons	115,970	16,556	132,526	157,244	...	24,718
Iron ore....."	8,067,511	22,669,789	30,737,300	41,516,314	...	10,779,014
Lumber.....ft. B.M.	441,201,153	24,729,272	465,930,425	603,253,650	...	137,323,225
Silver ore....net tons	.....	.....	.....	.....	.....	.....
Building stone....."	2,100	2,100	9,355	7,255
Unclassified freight....."	856,159	774,961	1,631,120	1,488,440	142,680

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The United States canal was open to navigation during the season of—

1889.	234 days	1901	230 days
1890	228 "	1902.	236 "
1891	225 "	1903	249 "
1892.....	233 "	1904	223 "
1893	219 "	1905	245 "
1894	234 "	1906	249 "
1895... ..	231 "	1907.	233 "
1896.....	232 "	1908.	231 "
1897 ..	234 "	1909	236 "
1898.....	241 "	1910.	224 "
1899.....	231 "	1911	237 "
1900	238 "		

The Canadian canal was open to navigation during the season of—

1895.	87 days	1904..	241 days
1896	218 "	1905.	255 "
1897	238 "	1906.....	253 "
1898.	243 "	1907.....	238 "
1899... ..	239 "	1908.....	235 "
1900	238 "	1909..	240 "
1901.	246 "	1910.....	248 "
1902..	264 "	1911 ..	236 "
1903 ..	256 "		

The average number of vessels passing per day through the two canals for the season of 1911 was seventy-nine.

A TABLE showing the total tonnage of the un l ermentioned articles moved Up and Down :—

YEAR.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley	Oats.	Rye.	Other Articles.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*.....	45,674	313,825	120,509	20,951		904	1,937
1872.....	26,651	239,998	254,902	6,035	7,752	64	2,745
1873.....	30,665	355,847	180,169	8,225	1,194	3	3,777
1874.....	24,019	413,212	181,151	18,871	5,954	513	8,677
1875.....	13,964	253,835	103,749	35,751	3,383	917	6,337
1876.....	15,778	201,906	144,501	18,455	24,496	1,454	3,198
1877.....	13,558	253,953	169,196	19,870	2,810	2,439	2,355
1878.....	9,121	191,982	185,931	10,979	3,088		2,302
1879.....	10,710	274,570	144,506	4,655	1,239	440	2,444
1880.....	12,679	242,020	163,738	17,772	477	1,016	1,480
1881.....	9,959	127,832	101,075	24,509		1,844	2,086
1882.....	12,261	215,056	54,799	20,126	611	3,226	403
1883.....	13,471	152,794	182,269	10,436	731	1,642	10,983
1884.....	13,683	144,851	118,811	7,155	10,746	1,320	9,168
1885.....	13,334	124,206	117,536	15,801	1,116		1,912
1886.....	19,474	154,169	219,442	1,595	4,911	564	14,657
1887.....	23,949	221,927	114,938	9,574	12,050		12,533
1888.....	16,983	160,963	194,886	5,906	26,629	811	13,608
1889.....	7,931	126,664	353,595	4,272	28,356	2,673	18,552
1890.....	14,461	118,002	327,394	10,830	27,728	1,549	20,876
1891.....	13,517	198,658	185,180	8,113	52,959	65,888	28,042
1892.....	17,046	232,019	192,548	6,433	37,173	9,392	32,815
1893.....	15,235	258,392	441,092	18,599	31,283	3,671	36,981
1894.....	33,628	270,993	169,233	28,353	27,962	567	60,673
1895.....	44,044	203,088	164,894	8,689	18,236	1,007	46,463
1896.....	42,425	320,563	320,444	11,368	28,178	9,405	56,591
1897.....	9,065	324,743	390,615	14,173	25,161	8,483	44,674
1898.....	5,578	207,647	437,861	12,286	17,502	16,127	23,182
1899.....	11,625	197,732	204,004	2,907	24,037	923	18,460
1900.....	10,968	137,800	163,509	4,035	41,055	3,538	14,815
1901.....	18,978	151,586	67,756	7,119	28,485	2,961	14,024
1902.....	22,282	225,171	67,647	7,418	11,232	4,079	12,963
1903.....	25,998	259,031	210,758	14,656	7,911	4,904	13,994
1904.....	35,049	165,138	116,444	27,171	16,582		13,184
1905.....	38,512	254,458	180,921	55,432	36,072	1,711	9,883
1906.....	18,294	326,798	211,805	31,446	49,306	1,784	10,739
1907.....	22,739	488,565	271,693	13,240	73,369	2,270	22,683
1908.....	23,209	732,131	127,402	31,172	33,423	6,667	21,668
1909.....	38,763	590,196	140,902	23,151	75,135	33	30,221
1910.....	41,152	587,493	229,980	21,575	136,233		18,149
1911.....	57,061	562,282	273,932	15,029	163,333	112	11,360

* Fiscal. † Apples, m eals of all kinds, pease, potatoes.

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through the Welland canal, during a period of forty-one years, ended December 31, 1911.

HEAVY GOODS.							
Total.	Railway Iron.	Other Iron.	Sugar and Salt.	Iron and Salt having paid full tolls on St. Lawrence canals.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
503,860	46,806	16,924	91,575	37,153	103,126	58,781	275,623
568,147	26,217	17,141	50,540	44,243	186,932	98,605	3,678
579,880	6,923	20,754	40,850	17,157	339,016	118,685	43,387
647,397	6,032	12,068	23,309	9,579	323,503	56,825	431,316
417,936	1,517	7,588	13,509	9,962	321,306	43,683	397,565
409,788	51	7,997	30,300	20,327	288,211	81,654	378,540
664,181	9,630	9,696	9,173	3,983	323,869	42,758	399,109
403,403	10	11,518	3,980	12,686	295,318	15,229	338,741
438,564	2,782	5,797	7,174	17,796	192,957	19,164	245,670
442,182	5,360	4,812	413	22,273	109,986	34,139	176,983
269,395	4,585	7,013	10	30,682	128,113	18,785	189,188
306,482	.....	5,348	50	17,327	237,559	23,700	283,984
373,326	1,237	7,922	66	17,037	307,058	31,785	365,105
305,734	698	652	461	3,242	274,471	53,205	332,729
273,905	78	2,055	597	14,243	248,272	26,728	291,973
414,812	166	6,123	48	12,324	271,356	27,447	317,464
394,971	1,351	5,636	.....	6,715	145,193	13,866	172,761
419,786	93	3,220	316	13,617	223,871	16,872	257,989
542,043	47	2,479	1,254	20,269	268,305	2,435	294,789
519,291	.....	753	1,027	28,047	202,384	8,138	240,349
367,177	127	1,610	2,567	7,953	224,644	3,415	240,316
727,426	163	1,567	878	3,666	211,616	355	218,245
805,253	6	2,075	374	8,139	233,096	.....	243,690
791,409	.....	3,072	159	977	203,608	.....	207,816
486,421	185	6,245	54	2,819	158,866	1,140	169,309
788,974	1,192	6,332	82	3,264	223,445	1,158	235,473
816,914	7,206	17,012	227	590	176,226	.....	201,261
720,183	1,444	11,722	799	734	162,336	13,433	190,468
459,688	567	6,361	1,282	1,318	97,732	26,125	133,385
375,720	.....	8,190	533	4,800	47,392	58,400	119,315
290,909	83	6,094	327	8,773	49,480	99,487	164,244
350,792	64	7,488	.....	15,201	64,014	22,480	109,247
537,252	488	5,407	2,554	45,846	147,884	18,323	220,502
373,568	11,381	9,957	1,093	4,164	113,525	39,683	179,803
576,989	2,651	10,912	226	4,221	172,642	22,381	213,033
650,172	3,747	8,493	100	16,204	147,587	5,862	181,993
894,559	961	4,923	246	18,761	267,212	25,040	317,143
975,672	.....	35,726	429	.....	316,921	18,004	371,080
898,401	.....	87,025	.....	.....	377,681	33,301	498,007
1,034,582	.....	57,581	.....	.....	577,491	34,311	669,383
1,083,109	.....	126,956	35,888	.....	619,682	37,480	820,006

B —TABLE showing the Total Way and Through Tonnage of the undermentioned Articles cleared downward on the Welland canal during a series of forty-one years, ended December 31, 1911.

VEGETABLE FOOD.

Years.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869.....	44,110	310,090	119,541	3,920	.....	680	1,541	479,882
1872.....	26,648	231,056	254,534	693	7,594	64	2,300	524,889
1873.....	30,660	345,720	180,042	643	1,188	3	3,557	563,813
1874.....	24,017	406,157	181,128	877	5,953	.....	3,301	620,933
1875....	13,930	248,555	103,477	813	3,383	500	4,304	374,962
1876.....	15,735	194,559	144,501	1,110	24,496	1,454	2,949	384,807
1877.....	13,588	248,894	169,185	10,216	2,810	2,405	1,833	448,931
1878.....	8,854	188,106	185,931	1,217	3,088	.....	2,100	389,296
1879.....	10,588	271,545	114,276	803	1,196	.....	2,387	430,795
1880.....	12,467	240,601	162,891	.....	477	.....	1,418	417,853
1881.....	9,655	121,393	103,075	252	.....	6	1,371	235,752
1882.....	12,205	205,876	54,797	537	.....	1,954	225	275,594
1883.....	13,256	146,741	182,143	975	731	518	10,971	355,335
1884...	13,626	135,804	118,811	270	10,746	477	9,018	288,752
1885.....	13,322	114,090	117,536	618	1,116	.....	1,628	248,310
1886...	19,418	146,151	218,897	.....	4,891	.....	14,581	403,928
1887.....	23,940	210,755	114,938	1,711	12,050	.....	12,149	375,543
1888.....	16,973	150,833	194,886	555	26,629	811	13,358	404,045
1889....	7,922	120,498	353,595	197	28,356	1,918	18,273	530,759
1890.....	14,461	114,924	327,394	6,519	27,728	1,121	20,836	512,983
1891.....	13,517	196,326	185,177	8,113	52,959	65,071	27,895	549,058
1892.....	17,046	229,569	192,548	6,433	37,173	9,392	32,548	524,709
1893.....	15,232	257,203	441,092	18,461	31,283	3,671	36,981	803,923
1894.....	33,628	270,514	169,233	28,353	27,962	.....	60,587	590,277
1895.....	43,895	202,636	164,894	8,689	18,236	.....	46,435	484,785
1896.....	42,159	319,388	320,444	11,368	28,178	8,970	54,031	784,538
1897.....	9,025	322,993	390,615	14,173	25,127	8,483	44,651	815,067
1898.....	5,578	206,313	437,849	12,286	17,491	16,127	23,170	718,814
1899.....	11,625	197,732	204,004	2,424	23,541	923	18,440	458,689
1900.....	10,968	137,800	163,509	3,449	40,256	3,538	14,802	374,322
1901.....	18,937	151,325	67,756	7,119	28,281	2,961	14,021	290,400
1902.....	22,282	223,499	67,647	7,418	11,223	4,079	12,912	349,060
1903.....	25,997	257,370	210,758	14,656	7,911	4,904	13,982	535,578
1904.....	35,046	164,515	116,444	27,171	16,582	.....	13,157	372,915
1905.....	38,512	247,599	180,921	55,432	36,072	1,711	9,882	570,129
1906.....	18,227	326,789	111,243	31,446	49,306	1,411	10,739	549,161
1907.....	22,689	488,565	271,693	13,240	73,369	2,270	22,683	894,509
1908.....	23,187	730,751	127,402	31,172	33,423	6,667	21,668	974,270
1909.....	38,763	590,074	140,902	23,151	75,135	33	30,206	898,264
1910.....	41,152	587,493	229,980	21,575	136,233	.....	18,149	1,034,582
1911.....	57,061	562,282	273,932	14,622	163,333	112	11,360	1,082,702

* Fiscal. † Apples, meal all kinds, peas, potatoes.

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C.—TABLE showing the Tonnage of the undermentioned Articles passed through the Welland canal in transit between Ports in the United States during a series of forty-one years, ended December 31, 1911.

YEARS.	VEGETABLE FOOD.						HEAVY GOODS.							
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	* Other Articles.	Total.	Railway Iron.	Other Iron.	Sugar and Sulf.	Coal.	Ores.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869	30,681	211,085	91,149	2,942		667	1,006	337,530	68,064	14,334	89,086	28,566	35,912	235,962
1872	10,482	124,695	89,761	1,391	7,400		608	234,337	24,040	13,239	49,843	95,741	59,401	224,264
1873	10,805	127,727	101,329	1,920	1,188	3	392	243,366	4,659	13,826	40,507	170,242	62,942	292,176
1874	8,230	229,053	125,627		5,948		5,368	374,226	5,742	8,941	22,888	203,673	19,651	260,895
1875	1,881	113,832	54,188	2,641	2,946	500	1,920	177,908	14	4,123	12,931	192,767	34,616	244,451
1876	5,187	96,247	58,138		1,905	525	403	162,405		5,531	29,395	167,110	25,808	227,844
1877	3,342	107,396	65,260	1,603	2,314	258	413	180,586	8,976	8,688	8,336	172,868	41,107	229,975
1878	1,316	65,542	60,026		277		341	128,361		10,713	3,892	150,583	13,535	178,723
1879	159	53,791	33,401	839	464		11	87,826	2,405	3,648	6,318	118,573	17,797	148,741
1880		30,611	16,122	1,551	296			48,580	4,743	3,515	371	65,945	18,380	92,954
1881		34,320	30,031	924			10	65,285	1,313	5,570		83,858	6,464	97,205
1882	107	30,227	32,433	537		684	14	64,002		4,076		158,552	14,533	177,161
1883	2,041	54,382	66,128	735	731		8,579	132,496	1,209	6,901	8	196,462	24,891	229,471
1884	1,715	40,956	53,707		9,874		8,170	114,422	698	599		210,790	15,100	227,187
1885	124	53,235	63,229	732	882		1	118,203		1,594		198,416	15,029	215,039
1886	7,591	53,258	94,048		4,790		13,201	172,888	156	5,328	1	189,964	11,364	206,845
1887	11,780	37,678	83,431	1,732	12,050		10,859	157,530	15	4,406		82,780	627	87,828
1888	8,563	39,999	102,974	2	26,510	179	11,598	189,825	63	1,601	56	173,259	2,309	177,288
1889	5,017	39,229	147,045		27,492		17,225	236,208		1,587	896	227,476	1,204	231,163
1890	9,204	31,527	180,842	6,519	27,030		20,497	275,619		504	208	162,231	1,620	189,342
1891	6,802	32,097	127,494	8,113	52,823		26,115	253,444		292	705	186,572	1,773	184,473
1892	11,018	26,950	131,222	6,433	36,935		31,992	244,550		576	2	183,895		207,171
1893	6,588	28,187	198,777	16,751	23,870	864	36,352	311,389		344		206,827		188,818
1894	17,795	53,846	105,329	28,095	27,621		60,462	198,358		297		188,521		149,917
1895	10,169	27,881	100,512	7,904	17,020		46,316	209,802	181	246		149,490		207,494
1896	16,224	34,878	175,094	11,128	16,137	490	46,456	300,407		146		207,348		165,143
1897	7,237	28,919	169,057	14,173	14,969		41,887	276,242		15		156,814		157,927
1898	4,212	11,268	150,667	6,909	12,732	1,197	22,671	209,656		339	4	88,931		91,481
1899	6,118	12,926	81,777	2,424	19,526	923	18,198	141,892		1,646	553	46,024		46,977
1900	7,966	18,771	60,545	2,402	39,706	2,149	14,248	145,787		953		46,702		45,970
1901	17,165	23,557	55,531	7,119	26,344		14,016	143,732		83	105			
1902	13,785	32,639	66,111	7,418	10,006		12,675	142,634				12,911		13,125

* Apples, meal of all kinds, peas, potatoes

C.—TABLE showing the Tonnage of the undermentioned Articles passed through the Wolland canal in transit between Ports in the United States during a series of forty one years, ended December 31, 1911 *Concluded.*

YEARS.	VEGETABLE FOOD.										HEAVY GOODS.					
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles.	Total.	Railway Iron.	Other Iron.	Sugar and Salt.	Coal.	Ores.	Total.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1903.	6,082	15,439	108,917	11,433	6,112	4,174	13,568	165,725	459			113,072		113,535		
1904.	8,556	14,269	60,964	16,621	16,497		13,079	129,986				63,882		63,882		
1905.	24,054	15,483	93,622	9,197	10,892		9,682	162,930		1		73,464		73,464		
1906.	15,215	13,410	135,240	9,266	11,323		10,678	195,132		169		33,523		33,692		
1907.	18,898	21,892	124,474	2,812	4,741	2	22,001	194,820		30		110,347	4,050	114,420		
1908.	17,694	24,651	99,830	7,148	2,070	2	21,393	172,788				158,351	1,400	159,751		
1909.	15,452	17,940	100,967	4,224			22,683	161,266		5		131,131	1,531	132,667		
1910.	11,859	10,717	126,938	3,840			8,574	161,925				201,893		201,893		
1911.	2,852	4,950	116,705				7,565	132,072		1,863	26,303	223,942	4,483	256,491		

* Apples, need all kinds, pease, potatoes.

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D.—STATEMENT showing the Quantity of Through Freight passed Down the Welland canal in Canadian and United States Vessels entering the canal at Port Colborne, during the season of Navigation in 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910 and 1911.

ARTICLES.	CANADIAN VESSELS.		UNITED STATES VESSELS		TOTAL.
	Steam.		Sail.		Steam and Sail.
	No.	Tonnage.	No.	Tonnage.	No. Tonnage.
	216	114,885	109	67,475	564 395,113
1900.	Tons.		Tons.		Tons.
Wheat.....	67,694		43,157		136,047
Corn.....	39,597		31,248		163,509
Barley.....					3,449
Oats.....					40,113
Pease.....	115		4		119
Rye.....	1,389		2,149		3,538
Coal.....	723		433		2,352
Miscellaneous merchandise..	53,649		31,536		132,093
Shingles, woodenware, &c..	1,078				1,078
Sawed lumber.....Ft. B.M.	6,847,279		5,344,258		45,946,425
Square timber.....Cub. ft.	439,827		355,951		1,005,781
Firewood.....Cords.	126		255		381
Staves.....No.	1,000				1,000
	No.	Tonnage.	No.	Tonnage.	No. Tonnage.
	197	103,802	114	59,022	522 367,640
1901.	Tons.		Tons.		Tons.
Wheat.....	57,641		58,973		149,810
Corn.....	7,350		4,689		67,756
Barley.....					7,119
Oats.....	944		27,197		28,141
Pease.....					
Rye.....	2,961				2,961
Coal.....	1,960		357		2,679
Miscellaneous merchandise..	71,300		32,312		123,955
Shingles, woodenware, &c....	18				18
Sawed lumber.....Ft. B.M.	6,533,423		4,060,251		34,776,420
Square timber.....Cub. ft.	362,441		204,682		726,038
Firewood.....Cords.	165		264		429
Staves.....No.					
	No.	Tonnage.	No.	Tonnage.	No. Tonnage.
	196	90,791	122	73,958	561 388,185
1902.	Tons.		Tons.		Tons.
Wheat.....	82,954		85,973		221,816
Corn.....	148		1,388		67,647
Barley.....					7,418
Oats.....	1,200		43		11,206
Pease.....					
Rye.....	3,808		271		4,079
Coal.....	3,977		25,732		51,538
Miscellaneous merchandise..	33,111		8,723		81,779
Shingles, woodenware, &c....	47		28		79
Sawed lumber.....Ft. B.M.	13,218,960		3,255,187		61,452,860
Square timber.....Cub. ft.	370,718		557,689		1,043,407
Firewood.....Cords	56		40		96
Staves.....No.			14,000		14,000

2 GEORGE V., A. 1912

D.—STATEMENT showing the Quantity of Through Freight passed Down the Welland canal in Canadian and United States Vessels, &c.—Continued.

ARTICLES.	CANADIAN VESSELS.				AMERICAN VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	329	151,850	76	45,918	243	252,094	69	27,854	627	477,716
1903	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	149,378		38,473		60,514		6,305		254,670	
Corn.....	21,356		4,682		174,588		10,132		210,758	
Barley.....	2,580		667		11,409		.....		14,656	
Oats.....	306		1,335		6,112		.....		7,753	
Pease.....	63		.....		22		.....		85	
Rye.....	.....		.....		4,904		.....		4,904	
Coal.....	389		12,991		8,133		8,496		30,009	
Miscellaneous merchandise..	39,563		3,367		41,584		2,000		86,514	
Shingles, woodenware, &c...	.....		54		.....		.....		54	
Sawed lumber.....Ft. B.M.	12,841,552		1,625,855		17,871,652		14,733,677		47,072,736	
Square timber.....Cub. ft.	572,000		660,000		.....		84,200		1,316,200	
Firewood.....Cords.	.....		210		9		.....		219	
Staves.....No.	.....		641,000		.....		.....		641,000	
	No.	Tonnage	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	228	157,539	55	39,375	205	187,748	42	15,918	530	400,580
1904.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	116,794		33,302		14,269		.....		164,365	
Corn.....	12,768		7,814		95,862		.....		116,444	
Barley.....	2,619		824		23,728		.....		27,171	
Oats.....	.....		.....		16,261		.....		16,261	
Pease.....	.....		.....		3		.....		3	
Rye.....	1,925		7,187		17,133		7,668		33,913	
Coal.....	34,907		.....		1,925		.....		36,832	
Miscellaneous merchandise..	29,567		.....		60,548		.....		90,115	
Shingles, woodenware, &c...	.....		.....		.....		.....		.....
Sawed lumber...Ft. B.M.	15,077,382		854,811		32,751,541		9,572,655		58,259,389	
Square timber.....Cub. ft.	944,508		744,000		.....		149,000		1,837,508	
Firewood.....Cords.	.....		.....		717		.....		717	
Staves.....No.	634,000		.....		.....		.....		634,000	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	252	182,373	91	48,692	319	286,656	64	29,120	726	546,841
1905.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	188,706		18,575		28,757		2,512		238,550	
Corn.....	6,385		6,636		163,374		4,526		180,921	
Barley.....	6,870		1,451		47,111		.....		55,432	
Oats.....	8,225		2,570		21,535		3,742		36,072	
Pease.....	.....		.....		76		.....		76	
Rye.....	.....		.....		1,711		.....		1,711	
Coal.....	18,756		35,324		28,330		8,678		91,088	
Iron ore.....	14,358		8,023		.....		.....		22,381	
Merchandise.....	29,375		7,485		74,975		3,126		114,961	
Shingles, woodenware, &c	.....		2,748,941		2,325		.....		2,325	
Sawed lumber.....Ft. B.M.	2,867,147		.....		38,290,831		12,479,698		54,589,200	
Square timber.....Cub. ft.	355,000		951,524			538,000	
Firewood.....Cords.		183,000		900			900	

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D.—STATEMENT showing the Quantity of Through Freight passed Down the Welland canal in Canadian and United States Vessels, &c.—*Continued.*

ARTICLES.	CANADIAN VESSELS.				AMERICAN VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	328	238,690	121	66,355	305	310,622	43	15,758	797	631,425
1906.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	250,493		34,355		35,578		.....		320,436	
Corn.....	8,177		.....		202,250		1,378		49,306	
Barley.....	8,546		5,046		17,854		.....		31,446	
Oats.....	21,900		16,083		11,323		.....		49,306	
Pease.....	.....		.....		11		.....		11	
Rye.....	.....		5		1,406		.....		1,411	
Coal.....	30,455		47,242		24,190		9,356		111,243	
Iron ore.....	5,862		.....		.....		.....		5,862	
Merchandise.....	35,383		7,009		110,263		50		152,705	
Shingles, woodenware, &c....	16		37		851		.....		904	
Sawed lumber..... Ft. B.M.	3,471,514		235,624		25,711,196		10,769,755		40,188,089	
Square timber..... Cub. ft.	375,000		200,000		.....		.....		575,000	
Firewood.....Cords.	110		18		1,093		.....		1,221	
Staves.....No.	.....		.....		300,000		.....		300,000	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	375	290,509	148	81,070	408	397,616	76	36,921	1,007	806,116
1907.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	294,298		50,808		130,818		4,429		480,303	
Corn.....	6,713		514		259,895		4,571		271,693	
Barley.....	8,726		468		4,046		.....		13,240	
Oats.....	49,689		16,647		7,033		.....		73,369	
Pease.....	.....		.....		25		.....		25	
Rye.....	.....		.....		2,270		.....		2,270	
Coal.....	31,506		57,373		50,183		14,493		143,555	
Iron ore.....	12,040		8,950		.....		.....		20,990	
Merchandise.....	21,545		9,436		5,231		6,235		42,447	
Shingles, woodenware, &c....	.....		.....		2,222		.....		2,222	
Sawed lumber..... Ft. B.M.	.....		.....		14,395,124		11,201,446		25,596,570	
Square timber..... Cub. ft.	558,000		323,000		.....		.....		881,090	
Firewood.....Cords	.....		.....		660		.....		660	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	567	432,623	149	64,034	428	319,030	36	19,866	1180	835,553
1908.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	505,151		39,001		183,101		3,498		730,751	
Corn.....	2,405		.....		124,997		.....		127,402	
Barley.....	19,775		1,133		10,264		.....		31,172	
Oats.....	30,091		643		2,689		.....		33,423	
Pease.....	.....		.....		40		.....		40	
Rye.....	742		.....		5,925		.....		6,667	
Coal.....	39,733		42,656		57,448		8,344		148,181	
Merchandise.....	26,815		14,783		14,410		13,686		69,694	
Firewood.....Cords	.....		70		1,173		.....		1,243	
Sawed lumber..... Ft. B. M.	.....		.....		17,572,070		6,578,545		24,150,615	
Square timber..... Cub. ft.	221,300		313,000		.....		.....		534,300	

2 GEORGE V., A. 1912

D.—STATEMENT showing the Quantity of Through Freight passed Down the Welland canal in Canadian and United States Vessels, &c.—*Concluded.*

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	555	486,406	136	71,034	323	324,576	26	17,317	1040	899,333
1909.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	415,208		34,903		133,172				583,283	
Corn.....	6,694				134,208				140,902	
Barley.....	17,943		360		4,848				23,151	
Oats.....	70,392		4,743						75,135	
Pease					63				63	
Rye	33								33	
Coal	160,475		53,681		21,097		630		235,883	
Merchandise.....	52,994		14,782		12,232		16,498		96,506	
Sawed lumber					31,643		10,214		41,857	
Square timber	3,450		7,840		125		1,475		12,890	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	596	599,416	142	88,963	249	285,704	14	13,563	1,001	987,646
1910.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat..	481,624		22,200		77,040				580,864	
Corn.....	15,759				214,221				229,980	
Barley.....	17,159		576		3,840				21,575	
Oats.....	135,743				490				136,233	
Pease					123				123	
Rye.....										
Coal.....	216,779		114,671		29,646		894		361,990	
Merchandise.....	39,149		15,231		21,818		20,466		96,664	
Sawed lumber	3,630		800		16,932				21,362	
Square timber.....	1,930		5,000		800				7,730	
Shingles					525				525	
Unenumerated.	74,434		1,772		24,031				100,237	
Total	986,207		160,250		389,466		21,360		1,557,283	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	640	670,037	122	83,755	270	304,171	48	42,830	1080	1,100,793
1911.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat...	483,984		24,826		49,330				558,140	
Corn...	29,978		11,368		232,586				273,932	
Barley.	14,382		240						14,622	
Oats...	162,455		878						163,333	
Pease										
Rye	112								112	
Coal.....	230,809		79,311		40,109		22,489		372,718	
Merchandise...	45,838		19,325		45,881		34,449		145,493	
Sawed lumber.....	300				25,361		9,020		34,681	
Square timber	3,260		4,500		2,277				10,037	
Shingles					60				60	
Unenumerated.....	95,017				14,386				109,403	
Total.....	1,066,135		140,448		409,990		65,958		1,682,531	

SESSIONAL PAPER No. 20a

WELLAND CANAL THROUGH FREIGHT—RECAPITULATION.

WELLAND CANAL—WEST BOUND FREIGHT.

THE total Quantity of Through Freight passed Up the Welland canal in Canadian and United States Vessels during the Season of Navigation in 1911 is as follows :—

Summary.	Tons.	Tons.
In Canadian steam vessels	391,081	
" sail vessels	6,658	
Total quantity in Canadian vessels.		397,739
In United States steam vessels.	409,665	
" sail vessels.	19,796	
Total in United States vessels.		429,461
Grand total freight passed Up the Welland Canal in Canadian and United States vessels.		827,200

STATEMENT of the Quantity of Through Freight passed Up and Down the Welland Canal during the Season of Navigation in 1911.

Summary.	Tons.	Tons.
In Canadian steam vessels up.	391,081	
" " down	1,066,135	
Total in Canadian steam vessels.		1,457,216
In Canadian sail vessels up.	6,658	
" " down	140,448	
Total in Canadian sail vessels		147,106
Total quantity in Canadian vessels.		1,604,322
In United States steam vessels up.	409,665	
" " down.	409,990	
Total in United States steam vessels		819,655
In United States sail vessels up	19,796	
" " down.	65,958	
Total in United States sail vessels.		85,754
Total quantity in United States vessels.		905,409
Total in Canadian and United States vessels.		2,509,731
	Down or East Bound.	Up or West Bound.
In Canadian vessels.	1,206,583	397,739
In United States vessels.	475,948	429,461
Total	1,682,531	827,200

F.—STATEMENT showing the Quantity of Freight passed Eastward, from Lake Erie, through the whole length of the Welland and St. Lawrence canals, to Montreal, during the Seasons of Navigation 1899 to 1911.

Articles.	1899.	1900	1901	1902	1903	1904	1905.	1906.	1907.	1908.	1909.	1910	1911.
	Tons.	Tons	Tons.	Tons	Tons	Tons	Tons	Tons	Tons	Tons.	Tons.	Tons	Tons
<i>Class B</i>													
Cement and water lime						35					5,652	484	
Clay, lime and sand		15					22						
Iron, railway				50		8,170	10						
“ pig		508											1,901
“ all other	5,063	4,292	1,178	5,785	2,542	1,651	384	269	124	553	12,689	7,154	34,540
Steel	3,000	5,420				16	48						
Stone, for cutting													
Apples									9,936				
Barley	596	1,288			2,206	9,697	43,607	21,196	105,984	24,318	19,143	20,000	14,853
Corn	150,990	109,330	14,319	1,719	123,864	55,021	84,204	55,559		10,454	17,137	77,612	134,239
Flaxseed			4,965		3,643	212	15,694	80,570	49,159	27,500	19,634	6,607	11,696
Flour	4,229	1,595	1,400	6,755	16,151	24,662	14,571	9,174	3,730	5,028	21,905	27,081	44,588
Meal, all kinds			35		348	57	270	60		156		10,323	3,967
Oats		8,927	1,584	1,442	2,438	7,846	21,404	37,164	66,941	28,081	65,624	129,900	147,180
Oil cake	10,250		1,083		462		9,229						
Pease		115			63						30		20
Rye	923	3,078	2,961	4,079	4,260		1,711	1,405	2,266	6,662	120		
Salt	183		50		132	615	168	75	143	419			
Seed, all kinds	200								20				
Hay, pressed	96		246										
Tobacco, raw			23										
Wheat	169,978	121,896	132,702	200,975	226,746	133,528	190,505	289,611	450,446	686,626	550,775	562,149	541,174
All other agricultural products, vegetables	32										5,876		
Hides, skins, horns and hoofs						10		2					
Horses	1												
Lard and lard oil			1,155				2,847	4,810					
Meats, all kinds			114										
Pork			34							524			
Tallow					3		53						
All other agricultural products, animal						1					366		
Total, class B.	345,565	256,491	161,849	220,805	382,858	241,522	384,727	499,895	688,749	790,321	718,951	841,310	934,158

Class 4.						
Agricultural implements	3					
Ashes	55	25	1,785	13	58	17
Bricks			3		2	16
Crockery						
Furniture						
Glass, all kinds	16	1	5		3	6
Molasses	159	6	1		15	3
Nails				54	240	
Oil	7,143	15,647	14,987	12,091	14,619	12,848
Paint			17		19	
Pitch and tar					5	
Rags						
Resin					4	
Soda ash			4		20	
Sugar			112			
Tin						
Tobacco	96					
White lead		16				
Whisky, beer and other spirits	74	11	32		2	766
Merchandise not enumerated	518	92	2,420	419	582	713
Total, class 4	7,909	15,798	19,366	12,577	15,569	14,456
Class 5.						
Barrels, empty	1	182	66	15		
Hoops						
Sawed lumber	924	15,760	2,635	1,085		
Staves, pipe and barrel						
" West India and pipe						
Timber, square, in vessels						
" in rafts	26			17		
Woodenware						
Total, class 5	951	15,942	3,265	1,117		
Special class.						
Coal						
Iron ore						
Stone, all kinds						
Total, special class						
Grand total	354,485	28,231	184,420	250,475	398,427	275,278

G.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland canals to Lake Erie, during the Seasons of Navigation in 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1909, 1910 and 1911.

Articles.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1909.	1910.	1911.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class B.												
Bricks,	24	49	196	22	80	115	132		536			
Brimstone,			5	20	23	12						
Cement and water lime,	997	1,931	2,916	178	3,924	39	181	88	13	400	17,565	8,625
Clay, lime and sand	8	4	2	1	181				100			
Cotton, raw					23							
Fish,	10	8	8		8	4			39			
Gypsum,	1											
Iron, railway,		74	748	11,735	39,641	283	126	7,289	4,119			
“ pig,		3		558	273		312	680	7,655			2,300
“ all other,	1,318	1,428	4,950	2,904	5,845	3,782	3,633	8,235	6,987	7,231	2,060	
Salt		48	75	4	87	99	150	17			540	
Steel,	18		3	11	332	58	192	111	2,561	35,153		22,352
Stone for cutting						41						
Flour			16				18					
Hay,									80	255	1,113	
Meals					17	25						
Oats												
Potatoes												
Seeds, all kinds,	121	218	302	58	325	164	35	17				
Tobacco, raw,				1	2							
Agricultural products, not enumerated, vegetable,			1	1			127					
Hides and skins,				16	6							
Horses,												
Lard and lard oil,				11			28	20	1			
Meats other than pork,					1	25			15			
Pork,		1										150
Wool												
All other articles not enumerated,												
Total, class B.	2,500	3,761	9,222	15,520	50,768	4,647	4,934	16,457	22,076	43,039	21,278	34,427

Class 1.

[illegible]

225

[illegible]

Spizella pusilla

[illegible]

H. —STATEMENT showing the Quantity of Freight passed Eastward through the Welland canal, from United States Ports to United States Ports, during the Seasons of Navigation from 1899 to 1911, inclusive.

Articles.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 1.													
Bricks													
Cement and water lime		18										2,000	
Fish									20				91
Iron, railway				30									
" all other	1,008	711					1	27	30				1,863
Salt	549		105										
Steel	13,522	3,110						2	509	9,086			
Stone for cutting													
Apples													
Barley	2,421	2,462	7,119	7,418	11,433	16,621	9,197	9,266	2,812	7,148	4,224	3,840	
Corn	81,777	60,545	55,531	66,111	108,917	60,964	93,622	135,240	124,474	99,830	100,967	126,938	116,705
Flour	6,118	7,966	17,168	13,785	6,082	8,556	21,054	15,215	18,898	17,694		11,859	2,852
Hay, pressed							200						
Meal, all kinds	18,198	14,244	14,016	12,675	13,546	13,076	9,606	10,668	21,976	21,353		8,621	7,565
Marble							87						
Nails							1						
Oil cake		2,705	1,302	110	740	16,497	228		114				
Oats	19,526	39,706	26,344	10,006	6,112	3	10,892	11,323	4,741	2,070			
Pease		4			22		76	11	25	40	63	123	
Potatoes													
Rye	923	2,149			4,174				2	2			
Flax seed	200				1,594			756			15,452		
Seeds, all kinds	11			10	27		43	3	17				
Tobacco			23										
Wheat	12,926	18,771	23,557	32,639	15,436	14,269	15,483	13,410	21,892	24,651	17,940	10,717	4,950
Agricultural products, vegetable		6	10		1			1	7		22,620		19
Hides and skins, &c.										21	315	233	
Horses		4			2								
Lard and lard oil, &c.	864	1,588	1,680	2,413				22	86				
Meats, other than pork													
Pork	343	117	970	632	152	379	273	268	429	190			
Sheep													
Tallow	201	631	119										
Wool	130		3	752	482	134	21	89	30		157	233	9
Total, class 3.	158,720	154,680	147,947	146,581	168,720	130,499	163,784	196,301	196,062	182,085	161,738	164,564	134,054

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Class 4.

Agricultural implements..				399		396	552	494		2	254		
Crockery and earthenware..									5				
Furniture..	7			3	17			1					2
Marble..				4									
Molasses	8	57											
Nails..	11								3				
Oil, in barrel	367	17		22	1,594	2,000	1		8	15		8	45
Paint..	2	36					17	1	1	1			
Rags.	1					4							
Soda ash..													
Stone, wrought													
Sugar		154		448	280		53	840	26,075		1,196		26,303
White lead									4				
Whiting..									21				
Whisky, beer and all other spirits..	168	1		1		3			30			122	230
Merchandise.	6,219	7,889		3,327	1,928	2,010	1,554	2,324	41,621	1,857	5,866	67,760	64,059
Total, class 4	6,783	8,164		3,805	4,218	4,017	2,021	3,660	67,768	1,875	7,316	67,890	90,639

Class 5.

Empty barrels		5		282			3	2	1				
Firewood, in vessels..					4		2,700	3,609	1,980	3,509		1,531	2,046
Lumber, sawn, in vessels..	57,695	55,128		38,685	72,806	48,337	30,194	27,701	14,314	21,571	24,327	11,738	30,191
Masts and spars, in vessels..													
Hop poles.							154		2,151	478			
Railway ties, in vessels							652	53	70				
Shingles.												25	
Split posts								1,500					
Staves, salt barrels..											125		
Timber, square, in vessels..											2,932	1,583	
Woodenware, &c													
Total, class 5	57,695	55,133		38,367	72,810	48,337	31,717	32,865	18,516	25,558	27,384	14,877	32,237

Special class.

Coal..	2,293	992		357	501		1,100	4,400	110,347		400	201,893	223,942
Stone, not suitable for cutting													
Kryolite									2,734				
Iron ore.									1,316			1,552	4,483
Total, special class.	2,293	992		357	501		1,100	4,400	114,397		400	203,445	228,425
Grand total	225,491	218,969	190,476	224,110	221,074	165,337	190,547	237,226	396,743	209,518	196,838	450,776	486,355

2 GEORGE V., A. 1912

L—STATEMENT of the quantity of Grain Transhipped to the following Ports for the season of 1911.

Ports.	Wheat.	Oats.	Barley.	Corn.	Other grain.	Total.	Total.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Tons.
Kingston	9,776,100	4,170,119	538,292	563,358	2,416	15,050,285	392,906
Prescott	78,034			345,650		423,684	12,019
Ogdensburg							
Total Bushels....	9,854,134	4,170,119	538,292	909,008	2,416	15,473,969
Total Tons.....	295,624	70,892	12,899	25,452	58		404,925

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M—The quantity of Coal passed through the Welland canal during a series of years from 1885 to 1911 inclusive, as follows :—

Years.	From Canadian Ports to Canadian Ports.	From Canadian Ports to Canadian Ports.	From United States Ports to United States Ports.		From United States Ports to Canadian Ports.		Total.
	Up.	Down.	Up.	Down.	Up.	Down.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1885.....			193,442	4,974	10,321	31,350	240,087
1886.....			184,564	5,400	22,187	49,724	261,875
1887.....			81,617	1,163	26,775	25,968	135,523
1888.....			172,381	878	17,365	27,183	217,807
1889.....			226,352	1,124	12,036	25,931	265,443
1890.....	80		116,616	615	17,280	22,781	202,372
1891.....			185,190	1,382	17,374	20,698	224,644
1892.....			183,244	651	12,391	15,330	211,616
1893.....			204,704	2,123	8,325	17,944	233,096
1894.....			187,791	727	1,269	13,947	203,737
1895.....	4		148,887	603	1,565	7,807	158,866
1896.....	20	210	206,093	1,255	4,127	11,740	223,445
1897.....		4	165,143		1,277	9,799	176,223
1898.....			156,055	759	986	4,536	162,336
1899.....			86,638	2,293	525	8,276	97,732
1900.....	8		45,032	992		1,360	47,392
1901.....			46,345	357	456	2,322	49,480
1902.....			12,410	501	65	51,037	64,013
1903.....	3		113,076		4,796	30,009	147,884
1904.....	2,919		62,782	1,100	3,711	32,813	103,325
1905.....			70,118	3,346	11,436	37,742	172,642
1906.....	60		29,123	4,400	7,161	106,843	147,587
1907.....	2,857		110,347		10,453	143,555	267,212
1908.....	4,401		158,351		5,988	148,181	316,921
1909.....			130,731	400	11,067	235,483	377,681
1910.....	2,045		197,482	4,411	15,974	357,579	577,491
1911.....	731		221,752	2,160	24,451	370,558	619,682

2 GEORGE V., A. 1912

N.—STATEMENT showing the quantity of Coal passed through the whole length of the St. Lawrence canals during the season of 1885 to 1911, inclusive.

Years.	Quantity passed up.	Quantity passed down to Montreal.	Total quantity passed up and down
	Tons.	Tons.	Tons.
1885.	5,035	122,829	127,864
1886.	3,301	118,802	122,103
1887.	7,579	121,618	129,197
1888.	8,341	123,050	131,391
1889.	5,360	124,290	129,650
1890.	6,538	135,168	141,706
1891.	7,951	141,701	149,652
1892.	7,543	157,134	164,677
1893.	2,285	147,139	149,424
1894.	16,213	169,552	185,765
1895.		165,151	165,151
1896.	689	161,551	162,240
1897.	40	164,963	165,003
1898.	400	175,609	176,009
1899.	448	201,546	201,994
1900.	10	280,169	280,179
1901.	2,765	298,245	301,010
1902.	9,231	95,702	104,933
1903.	30	290,548	290,578
1904.	9,670	320,973	330,643
1905.	8,518	345,589	354,107
1906.	6,989	313,080	320,069
1907.	1,281	406,978	408,259
1908.	23,939	448,140	472,079
1909.	13,543	469,695	483,238
1910.	7,351	746,926	754,277
1911.	6,230	756,474	762,704

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O. —STATEMENT showing the quantity of Through Freight passed down the Welland canal, &c.

RECAPITULATION.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on Lake Ontario.
1900.	Tons.	Tons.	Tons.
Barley.....	1,288	563	1,598
Corn.....	109,358	9,844	44,406
Oats.....	8,925	348	30,840
Pease.....	115	.....	4
Rye.....	3,078	160	300
Wheat.....	121,896	6,610	7,541
Total, grain.....	**244,661	17,525	84,589
Other articles.....	43,670	95,680	93,287
Total.....	288,231	113,205	177,876
1901.			
Barley.....	.....	.....	.....
Corn.....	14,319	4,828	49,609
Oats.....	1,584	853	25,704
Pease.....	.....	.....	.....
Rye.....	2,961	.....	.....
Wheat.....	132,702	8,051	9,057
Total, grain.....	†151,566	13,732	83,370
Other articles.....	32,854	128,614	91,799
Total.....	184,420	142,346	175,169
1902.			
Barley.....	.....	.....	7,418
Corn.....	1,719	10,335	55,583
Oats.....	1,412	.....	9,764
Pease.....	.....	.....	.....
Rye.....	4,079	.....	.....
Wheat.....	200,075	12,452	8,389
Total, grain.....	†208,215	22,787	81,165
Other articles.....	42,260	32,946	179,914
Total.....	250,475	55,733	261,078
1903.			
Barley.....	2,206	1,017	11,433
Corn.....	116,223	13,846	80,689
Oats.....	2,438	.....	5,315
Pease.....	63	.....	22
Rye.....	4,200	.....	644
Wheat.....	226,746	14,199	13,725
Total grain.....	\$351,936	29,062	111,828
Other articles.....	38,850	82,298	101,621
Total.....	390,786	111,360	213,449

O.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal, &c.—*Continued.*

RECAPITULATION—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on Lake Ontario.
1904.	Tons.	Tons.	Tons.
Barley	9,697	853	16,621
Corn	55,021	3,950	57,473
Oats			16,497
Pease			3
Rye			
Wheat.....	*133,528	18,908	11,929
Total grain.....	198,246	23,711	102,523
Other articles.....	77,031	80,092	138,475
Total.....	375,277	103,803	240,998
1905.			
Barley... ..	43,607	2,628	9,197
Corn	84,204	3,095	93,622
Oats	21,404	3,776	16,892
Pease			76
Rye	1,711		
Wheat	190,505	32,562	15,483
Total grain.....	341,431	42,061	129,270
Other articles.....	107,273	123,225	104,747
Total	448,704	165,286	234,017
1906.			
Barley	21,196	984	9,266
Corn	55,559	15,688	140,558
Oats	37,164	819	11,323
Pease		11	
Rye	1,405	6	
Wheat	*289,611	15,843	14,972
Total, grain	404,935	33,351	176,119
Other articles	118,224	176,277	59,884
Total	523,159	209,628	236,003
1907.			
Barley	9,936	492	2,812
Corn	106,299	31,901	133,493
Oats	67,063	1,565	4,741
Pease			25
Rye	2,266	2	1
Wheat	*450,009	8,072	22,222
Total grain.....	635,573	42,032	163,295
Other articles.....	153,594	126,423	93,127
Total.....	789,167	168,455	256,422

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O.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal, &c.—*Concluded.*

RECAPITULATION — *Concluded.*

cles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on Lake Ontario.
1908.	Tons.	Tons.	Tons.
Barley	24,318	3,546	3,308
Corn	10,454	11,489	105,459
Oats	28,081	3,272	2,070
Pease			40
Rye	6,662	3	2
Wheat	1686,626	19,832	24,293
Total grain	756,141	38,142	135,172
Other articles	108,785	162,378	91,875
Total	864,926	200,520	227,047
1909.			
Barley	19,143		4,008
Corn	17,137	22,798	100,967
Oats	65,624	2,872	6,639
Pease	30		33
Rye	33		
Wheat	550,775	14,568	17,940
Total grain	652,742	40,238	129,587
Other articles	272,263	113,970	126,223
Total	925,005	154,208	255,810
1910.			
Barley	20,000		1,575
Corn	77,612	49,326	103,042
Oats	129,900	6,333	
Pease			123
Rye			
Wheat	562,149	7,998	10,717
Total grain	789,661	63,657	115,457
Other articles	380,500	152,325	55,683
Total	1,170,161	215,982	171,140
1911.			
Barley	14,331	291	
Corn	134,239	22,988	116,705
Oats	147,180	16,153	
Pease			
Rye		112	
Wheat	541,174	12,016	4,950
Total grain	836,924	51,560	121,655
Other articles	500,881	115,721	55,790
Total	1,337,805	167,281	177,445

APPENDIX A. *Continued.*

TABLE 1.—COMPARATIVE Statement of Grand Total Freight passed through the undermentioned canals during the Seasons of Navigation, 1910 and 1911.

CANALS.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		Tons.		Total Tons.		ORIGIN OF CARGO.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.			Canadian.	United States.
1910.														
Sault Ste. Marie.....	779,961	1,567,285	28,648	565,335	3,035,290	29,332,862	969,248	117,058	4,813,147	31,582,540	36,395,687	3,378,268	33,017,419	
Welland	205,790	742,908	154,617	6,983	288,198	197,301	16,229	654,264	724,834	1,601,456	2,326,290	1,196,946	1,129,344	
St. Lawrence.....	556,833	1,123,520	286,075	22,235	334	.....	777	770,978	844,019	1,916,733	2,760,752	1,973,441	787,311	
Chambly	383,148	12,307	130,245	.....	.....	.....	.....	143,599	513,393	155,906	669,299	525,700	143,599	
St. Peter's.....	33,482	52,240	.....	.....	.....	.....	229	.....	33,711	52,240	85,951	85,722	229	
Murray.....	161,737	8,546	555	.....	.....	.....	.....	7,103	162,292	15,649	177,941	170,680	7,261	
Ottawa.....	49,923	206,519	.....	61,013	.....	.....	7,806	.....	57,729	327,532	385,261	377,268	7,993	
Rideau	58,049	57,218	4	5,870	.....	.....	1,460	12,280	59,513	75,368	134,881	121,043	13,838	
Trent.....	15,665	30,598	.....	.....	.....	.....	.....	.....	15,665	30,598	46,263	46,263	.....
St. Andrews.....	8,152	131	.....	.....	.....	.....	.....	.....	8,152	131	8,283	8,283	.....
Grand total	2,312,740	3,861,272	600,144	661,436	3,323,822	29,530,163	995,749	1,705,282	7,232,455	35,758,153	42,990,608	7,883,614	35,106,994	
1911.														
Sault Ste. Marie	644,899	1,585,279	22,157	915,601	2,236,880	23,269,870	2,070,307	206,716	4,974,243	25,977,466	30,951,709	3,177,581	27,774,128	
Welland	318,764	827,392	190,101	693	309,693	175,752	24,451	690,873	842,919	1,694,710	2,537,629	1,296,480	1,241,149	
St. Lawrence	629,642	1,086,547	328,732	38,085	194	12	392	1,022,104	958,960	2,146,748	3,105,708	2,063,861	1,041,847	
Chambly	369,728	12,617	31,465	.....	.....	.....	.....	155,989	431,193	168,636	599,829	443,846	155,983	
St. Peter's	29,177	46,121	.....	.....	.....	.....	.....	.....	29,177	46,121	75,298	75,298	.....
Murray.....	152,964	6,798	15	41,340	.....	.....	4,249	.....	152,979	10,478	163,457	159,409	4,048	
Ottawa.....	53,453	221,029	.....	.....	.....	.....	.....	.....	57,702	262,369	320,071	312,269	7,802	
Rideau.....	77,378	84,831	.....	.....	.....	.....	.....	10,018	77,378	94,849	172,227	159,738	12,489	
Trent.....	23,908	33,382	.....	.....	.....	.....	.....	.....	23,908	33,382	57,290	57,290	.....
St. Andrews.....	40,693	6,332	.....	.....	.....	.....	.....	.....	40,693	6,332	47,135	47,135	.....
Grand total	2,376,516	3,910,558	572,470	995,719	2,546,677	23,445,634	2,099,399	2,083,380	7,589,062	30,441,291	38,030,353	7,792,907	30,237,446	

TABLE II.—STATEMENT Showing the Number, Tonnage and Nationality of Vessels passed through the Several canals during the Season of Navigation in 1911.

CANAL STATISTICS																									
NATIONAL PAPER No. 20a																									
VESSELS.	TOTAL NUMBER OF TRIPS.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.													
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.														
CANADIAN VESSELS.																									
Steam and Sail.																									
Sault Ste. Marie.....	2,713	1,150,799	1,113,040	112,552	171,329	5,707	2,173	379,706	170,374	1,648,764	1,460,116	3,108,880													
Welland.....	1,664	607,518	553,993	141,959	212	2,791	123	12,893	222,059	765,161	776,387	1,541,548													
St. Lawrence.....	8,367	1,508,513	1,336,841	53,284	375	1	36	70	204,837	1,561,868	1,542,089	3,103,957													
Chambly.....	497	22,126	21,374	4,950	.....	.....	.....	.....	3,001	27,076	24,375	51,451									
St. Peters.....	1,260	45,462	43,808	.....	.....	.....	.....	.....	.....	45,462	43,808	89,270							
Murray.....	1,356	220,063	124,076	15,563	.....	.....	.....	88	8,459	235,654	132,535	368,189										
Ottawa.....	2,109	182,651	193,245	.....	1,774	.....	.....	253	.....	182,906	195,019	377,925									
Rideau.....	3,031	104,945	106,725	5,252	.....	.....	.....	.....	5,640	110,197	112,365	222,562									
Trent Valley.....	4,165	97,742	99,231	.....	.....	.....	.....	.....	.....	97,742	99,231	196,973							
St. Andrews.....	423	57,254	54,183	.....	.....	.....	.....	.....	.....	57,254	54,183	111,437							
Total Canadian.....	25,585	3,997,073	3,646,516	333,500	176,690	8,499	2,332	393,012	614,570	4,732,084	4,440,108	9,172,192													
UNITED STATES VESSELS.																									
Sault Ste. Marie.....	4,068	11,705	1,585	16,170	544,402	3,065,500	11,865,237	699,455	48,286	3,792,830	12,459,510	16,252,340													
Welland.....	816	2,148	35	89,267	842	267,682	190,837	1,398	203,422	360,495	395,136	755,631													
St. Lawrence.....	1,556	23,930	8,238	347,046	15,902	15,679	1,397	84	406,802	386,739	432,339	819,078													
Chambly.....	3,511	2,017	404	173,660	.....	.....	.....	.....	191,897	175,677	192,301	367,978									
St. Peters.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Murray.....	84	627	784	754	389	75	13	299	80	1,755	1,266	3,021													
Ottawa.....	304	7,849	157	.....	14,682	.....	.....	7,848	.....	15,697	14,839	30,536									
Rideau.....	31	1,502	1,440	.....	96	.....	.....	.....	.....	1,502	1,536	3,038								
Trent Valley.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
St. Andrews.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Total United States.....	10,370	49,778	12,643	626,897	576,313	3,348,936	12,057,484	709,084	850,487	4,734,695	13,496,927	18,231,622													
Grand Total Canadian and United States.....	35,955	4,046,851	3,659,159	960,397	753,003	3,357,435	12,059,816	1,102,096	1,465,057	9,466,779	17,937,035	27,403,814													

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Table 3.—STATEMENT showing the Number, Tonnage and Nationality of Vessels

VESSELS.	Total Number	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.	
		Up.	Down.	Up.	Down.
SAULT STE. MARIE CANAL.					
Canadian vessels, steam	2,493	1,136,791	1,099,652	112,302	173,873
" " sail.	220	14,008	13,388	250	456
Total Canadian	2,713	1,150,799	1,113,040	112,552	174,329
United States vessels, steam	4,000	10,342	600	16,170	538,141
" " sail	68	1,363	985		6,261
Total United States	4,068	11,705	1,585	16,170	544,402
Grand Total, Sault Ste Marie Canal	6,781	1,162,504	1,114,625	128,722	718,731
WELLAND CANAL.					
Canadian vessels, steam	1,375	574,556	518,308	88,907	212
" " sail.	289	32,962	35,685	53,052	
Total Canadian	1,664	607,518	553,993	141,959	212
United States vessels, steam	701	2,148	35	61,509	842
" " sail.	115			27,758	
Total United States	816	2,148	35	89,267	842
Grand Total, Welland Canal	2,480	609,666	554,028	231,226	1,054
ST. LAWRENCE CANALS.					
Canadian vessels, steam	4,106	929,604	786,208	41,920	
" " sail.	4,261	578,909	550,633	8,364	375
Total Canadian	8,367	1,508,513	1,336,841	50,284	375
United States vessels, steam	1,033	7,456	3,039	322,943	510
" " sail.	523	16,474	5,199	24,103	15,392
Total United States	1,556	23,930	8,238	347,046	15,902
Grand Total, St. Lawrence Canals.	9,923	1,532,443	1,345,079	400,330	16,277
CHAMBLY CANAL.					
Canadian Vessels, steam	208	14,051	12,823		
" " sail	289	8,075	8,551	4,950	
Total Canadian	497	22,126	21,374	4,950	
United States Vessels, steam	2				
" " sail	3,509	2,017	404	173,660	
Total United States	3,511	2,017	404	173,660	
Grand Total, Chamblly Canal	4,008	24,143	21,778	178,610	
ST. PETERS CANAL.					
Canadian Vessels, steam	269	15,436	12,271		
" " sail	991	30,026	31,537		
Total Canadian	1,260	45,462	43,808		

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FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.
Up.	Down.	Up.	Down.	Up.	Down.	
5,707	2,173	379,621	170,324	1,634,421	1,446,022	3,080,443
.....	.....	85	250	14,343	14,094	28,437
5,707	2,173	379,706	170,574	1,648,764	1,460,116	3,108,880
3,050,452	11,784,035	693,003	47,695	3,769,967	12,370,471	16,140,438
15,048	81,202	6,452	591	22,863	89,039	111,902
3,065,500	11,865,237	699,455	48,286	3,792,830	12,459,510	16,252,340
3,071,207	11,867,410	1,079,161	218,860	5,441,594	13,919,626	19,361,220
1,932	123	12,893	169,080	678,288	687,723	1,366,011
859	.....	.....	52,979	86,873	88,664	175,537
2,791	123	12,893	222,659	765,161	776,387	1,541,548
263,191	185,034	785	161,689	327,633	347,600	675,233
4,491	5,803	613	41,733	32,862	47,536	80,398
267,682	190,837	1,398	203,422	360,495	395,136	755,631
270,473	190,960	14,291	425,481	1,125,656	1,171,523	2,297,179
1	.....	70	158,432	974,595	944,640	1,919,235
.....	36	.....	46,405	587,273	597,449	1,184,722
1	36	70	204,837	1,561,868	1,542,089	3,103,957
15,327	1,055	84	348,216	345,810	352,820	698,630
352	342	.....	58,586	40,929	79,519	120,448
15,679	1,397	84	406,802	386,739	432,339	819,078
15,680	1,433	154	611,639	1,948,607	1,974,428	3,923,035
.....	.....	.....	15	14,051	12,838	26,889
.....	.....	.....	2,986	13,025	11,537	24,562
.....	.....	.....	3,001	27,076	24,375	51,451
.....	.....	.....	195	.....	195	195
.....	.....	.....	191,702	175,677	192,106	367,783
.....	.....	.....	191,897	175,677	192,301	367,978
.....	194,898	202,753	216,676	419,429
.....	15,436	12,271	27,707
.....	30,026	31,537	61,563
.....	45,462	43,808	89,270

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TABLE 3.—STATEMENT Showing the Number, Tonnage and Nationality of Vessels

VESSELS.	Total Number of Trips.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.	
		Up.	Down.	Up.	Down.
ST. PETERS CANAL -Con.					
United States Vessels, steam.....					
" " sail.....					
Total United States.....					
Grand Total St. Pete Canal	1,260	45,462	43,808		
MURRAY CANAL.					
Canadian Vessels, steam.....	940	179,768	87,472	13,740	
" " sail.....	416	40,295	36,604	1,763	
Total Canadian.....	1,356	220,063	124,076	15,503	
United States Vessels, steam.....	69	435	769	686	389
" " sail.....	15	192	15	68	
Total United States.....	84	627	784	754	389
Grand Total, Murray Canal....	1,440	220,690	124,860	16,257	389
OTTAWA CANALS.					
Canadian Vessels, steam.....	981	95,893	101,791		583
" " sail.....	1,128	86,758	91,454		1,191
Total Canadian.....	2,109	182,651	193,245		1,774
United States Vessels, steam.....					
" " sail.....	304	7,849	157		14,682
Total United States.....	304	7,849	157		14,682
Grand Total, Ottawa Canals....	2,413	190,500	193,402		16,456
RIDEAU CANAL.					
Canadian Vessels, steam.....	2,361	78,693	79,833	5,252	
" " sail.....	670	26,852	26,892		
Total Canadian.....	3,031	104,945	106,725	5,252	
United States Vessels, steam.....	1		34		
" " sail.....	30	1,502	1,406		96
Total United States....	31	1,502	1,440		96
Grand Total, Rideau Canal	3,062	106,447	108,165	5,252	96
TRENT VALLEY CANAL.					
Canadian Vessels, steam.....	3,088	66,693	66,817		
" " sail.....	1,077	31,049	32,414		
Total Canadian.....	4,165	97,742	99,231		
United States Vessels, steam.....					
" " sail.....					
Total United States....					
Grand Total, Trent Valley Canal ..	4,165	97,742	99,231		

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TABLE 3. STATEMENT showing the Number, Tonnage and Nationality of Vessels

VESSELS.	Total Number of Trips	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.	
		Up.	Down.	Up.	Down.
ST. ANDREWS CANAL.					
Canadian Vessels, steam	341	38,350	39,155		
" " sail.. . . .	82	18,904	15,028		
Total Canadian.....	423	57,254	54,183		
United States Vessels, steam					
" " sail					
Total United States.....					
Grand Total, St. Andrews Canal.....	423	57,254	54,183		

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FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.
Up.	Down.	Up.	Down.	Up.	Down.	
				38,350	39,155	77,505
				18,904	15,028	33,932
				57,254	54,183	111,437
				57,254	54,183	111,437

TABLE 4.—Comparative Statement of all the canals for the Years ending December 31, 1910 and 1911.

Articles.	1910.	1911.	Increase.	Decrease.
<i>Class No. 1.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Canadian vessels—Steam	6,927,062	7,286,949	359,887	
“ Sail	2,004,728	1,885,243		119,485
United States vessels—Steam	20,991,142	17,527,229		3,463,913
“ Sail	786,155	714,393		71,762
Total, Class No. 1	30,709,087	27,403,814	359,887	3,655,160
<i>Class No. 2.</i>	<i>No.</i>	<i>No.</i>	<i>No.</i>	<i>No.</i>
Passengers	320,574	304,904		25,670
<i>Class No. 3.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Barley	161,016	145,576		15,440
Buckwheat	1,048	84		964
Corn	336,592	451,597	115,005	
Oats	365,430	657,878	92,448	
Rye	4,272	3,701		571
Flax	85,654	99,334	13,680	
Pease	340	163		177
Wheat	3,222,862	3,528,185	305,323	
Flour	363,187	366,870	3,683	
Hay	42,846	73,013	30,167	
Other mill products	55,063	41,083		13,920
Fruit and vegetables	16,026	12,740		3,286
Potatoes	7,082	8,839	1,757	
Live stock	2,250	3,135	885	
Poultry, game, fish	2,815	2,062		753
Dressed meats	148	712	564	
Other packing house products	1,205	1,266	61	
Hides and leather	1,261	236		1,025
Wool	675	1,319	644	
All other animal products	12,169	10,901		1,268
Total, Class 3	4,881,881	5,408,694	564,217	37,404
<i>Class No. 4.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Agricultural implements	28,358	41,291	12,933	
Cement, bricks, lime	728,453	654,629		73,824
Household goods and furniture	3,797	2,971		826
Iron, pig and bloom	115,997	61,119		54,878
Iron and steel, all other	252,061	418,169	166,108	
Petroleum and other oils	106,491	194,105	87,914	
Sugar and salt	101,063	89,963		11,040
Wines, liquors and beers	28,316	22,203		6,113
Merchandise not enumerated	861,361	874,613	13,252	
Total, Class No. 4	2,225,537	2,359,063	280,207	146,681
<i>Class No. 5.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Pulpwood	777,427	823,494	46,067	
Sawed lumber	735,589	596,588		139,001
Squared timber	58,633	42,924		15,709
Shingles	11,475	12,422	947	
Other woods	98,294	70,711		27,583
Total, Class No. 5	1,681,418	1,546,139	47,014	182,293

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TABLE 4. —Comparative Statement of all the canals for the Years ending December 31, 1910 and 1911—*Concluded*.

Articles.	1910.	1911.	Increase.	Decrease.
<i>Class No. 6.</i>	Tons.	Tons.	Tons.	Tons.
Hard coal	1,208,722	1,246,273	37,551	.....
Soft coal.....	4,429,222	4,668,843	239,621	.....
Coke	792	14,160	13,368	.....
Copper ore.....	37,986	16,556	.....	21,430
Iron ore.....	28,494,716	22,715,838	.....	5,778,878
Other ore	30,334	54,787	24,453	.....
Total, Class No. 6.	34,201,772	28,716,457	314,993	5,800,308
Grand total	42,990,608	38,030,353	1,206,431	6,166,686

Net decrease 4,960,255.

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Class No. 4.										
Agricultural implements	20,181	19,695	257	209	6	147	753	43		
Cement, bricks, lime	135,017	86,072	187,200	11,353	6,600	48,306	96,977	5,044		
Household goods and furniture	8	10	1,766	121	8	333	625	71		
Iron, pig and bloom	29,744	17,675	11,084	153	300	824	892	45		
" and steel, all other	175,170	109,281	129,667	831	180	886	1,251	163		4
Petroleum and other oils	58,903	77,285	55,229	80	584	744	1,186	19		1
Sugar and salt	27,386	35,888	18,492	781	1,371	2,842	3,174	7		
Wines, liquors and beers	5,997	6,548	6,982	18	222	1,058	1,325	32		
Merchandise not enumerated.	402,110	187,411	147,315	11,824	2,497	10,312	8,754	7,127		33,148
Total, Class No. 4	854,516	539,865	557,992	25,370	11,828	65,452	114,937	12,551		33,153
Class No. 5.										
Pulpwood	2,301	197,986	310,435	289,728			2,847	8,465		10,163
Sawed lumber	46,771	35,809	205,711	106,497	4,248	174,253	24,607	2,553		2,104
Squared timber	1,713	10,042	24,610		559	3,661	607	1,732		
Shingles	11,395	60	16		750	16	68	104		
Other woods	673	6,526	10,383	479	1,563	24,867	6,221	18,488		1,506
Total, Class No. 5	56,853	250,423	551,155	396,704	7,120	202,797	34,350	31,342		13,773
Class No. 6.										
Hard coal	433,859	246,964	430,166	118,226	241	3,973	8,717	332		127
Soft "	3,673,094	372,718	547,080	47	37,283	31,139	5,188	454		
Coke	14,160									
Copper ore	16,546									
Iron "	22,639,789	31,197	8	14,844						
Other "	11,975	6,283	6,274	1,996	155	4,464	257	11,263		
Total, Class No. 6	26,819,433	657,162	983,528	135,537	37,659	39,576	14,172	12,049		127
Grand total	30,951,709	2,537,629	3,105,708	599,829	75,298	320,071	172,227	57,290		47,135

TABLE 6.—SUMMARY Statement of Traffic on the undermentioned canals during the Season of Navigation, ended December 31, 1911, showing the total quantity of each description of property passed through.

	Sault Ste. Marie	Welland	St. Lawrence	Chambly	St. Peter's	Murray	Ottawa	Rideau	Trent Valley	St. Andrew's
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Vessels of all kinds	19,361,220	2,297,179	3,923,035	419,429	89,270	371,210	408,461	225,600	196,973	111,437
Passengers	No. 39,044	No. 1,288	No. 101,750	No. 2,708	No. 709	No. 26,187	No. 25,497	No. 25,298	No. 77,078	No. 5,345
<i>Forest Produce of Wood.</i>										
Pulpwood	Tons. 2,301	Tons. 197,986	Tons. 310,423	Tons. 289,728	Tons. 4,248	Tons. 1,569	Tons. 174,253	Tons. 2,487	Tons. 8,465	Tons. 10,163
Sawed lumber	40,771	35,809	205,711	106,497	4,248	35	174,253	24,607	2,553	2,104
Squared timber	1,713	10,042	24,610		559		3,661	607	1,732	
Shingles	11,395	60	16		750	13	16	68	101	
Other woods	673	6,526	10,383	479	1,563	5	24,867	6,221	18,488	1,506
Total	56,853	250,423	551,155	396,704	7,120	1,622	202,797	34,350	31,342	13,773
<i>Animals and Produce of Animals.</i>										
Live stock	24		2,081	245	1	8	436	30	310	
Poultry, game and fish	126	126	79	4	1,656	5	38	28		
Dressed meats	7		37		493	4	20	151		
Other packing house products	30	30	388	66	3	10	306	433		
Hides and leather	142	20	52				4	15	3	
Wool	649	398	260					12		
All other animal products			7,046			86	1,663	2,015	84	
Total	978	574	9,943	315	2,153	113	2,467	2,684	397	
<i>Agricultural Products</i>										
Barley	114,396	15,029	15,991		1	144			15	
Buckwheat			71						5	
Corn	29,003	273,932	157,153	145			87	277		
Oats	331,430	163,333	156,764	1,038	3,833		613	851	16	
Rye	3,587	112					2			
Flax	81,660	5,976	14,696				2			

	2	3	4	5	6	7	8	9	10	11	12
Peas											
Wheat											
Flour											
Hay											
Other mill products											
Fruits and vegetables											
Potatoes											
Total	3,219,929	1,089,605	1,003,090	41,903	16,538	1,109	9,779	6,084	951	82	
<i>Manufactures.</i>											
Agricultural implements	20,181	19,695	257	200	6		147	753	43		
Cement, bricks and lime	135,017	86,072	187,200	11,353	6,660	78,000	18,306	96,977	5,044		
Household goods and furniture		10	1,766	121	8	29	333	625	71		
Iron, pig and bloom	29,744	17,675	11,084	153	300	402	821	892	45		
Iron, steel, all other	175,170	109,281	129,607	831	180	736	886	1,251	163		
Petroleum and other oils	58,903	77,285	55,229	80	584	74	741	1,186	19		
Sugar and salt	27,386	35,888	18,492	781	1,371	22	2,842	3,174	7		
Wines, liquors and beers	5,997	6,548	6,982	18	222	21	1,058	1,325	32		
Merchandise not enumerated	402,116	187,411	147,315	11,824	2,497	64,115	10,312	8,754	7,127	33,148	
Total	854,516	539,865	557,992	25,370	11,828	143,399	65,452	114,937	12,551	33,153	
<i>Products of Mines.</i>											
Hard coal	433,859	246,964	430,166	118,226	241	3,668	3,973	8,717	332	127	
Soft "	3,673,094	372,718	547,080	471	37,283	1,416	31,139	5,188	454		
Coke	14,160										
Copper ore	16,556										
Iron "	22,669,789	31,197	8	14,814							
Other "	11,975	6,283	6,274	1,996	135	12,130	4,464	267	11,263		
Total	26,819,433	657,162	983,528	135,537	37,659	17,214	39,576	14,172	12,049	127	
Grand totals (passengers and tonnage of vessels not included)	30,951,709	2,537,629	3,105,708	599,829	75,298	163,457	320,071	172,227	57,290	47,135	

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TABLE 7 (No. 1)—GENERAL STATEMENT showing the Quantity of each Article Transported on the Sault Ste. Marie canal during the Season of Navigation in 1911.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.		Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Canadian.	United States.
Agricultural implements.	20,166	15							20,166	15	20,181		20,181	
All other animal		28,582								114,396	114,396		38,910	75,486
Barley						77,588								
Buckwheat.														
Cement, bricks, &c	125,437				9,130		450		135,017		135,017		125,372	9,645
Coal, hard	12				244,464		189,383		433,859		433,859			433,859
" soft	3,527				1,899,125		1,770,442		3,673,094		3,673,094		546	3,672,548
Coke							14,160		14,160		14,160			14,160
Corn.						9,307		10,696		20,003	20,003			20,003
Dressed meats	7								7		7			
Flax		14,315				57,092				81,660	81,660		24,568	57,092
Flour	33	179,395				67,701		4,671	33	251,767	251,800		183,449	68,351
Fruits and vegetables	184								184		184		184	
Hay	1,367								1,367		1,367		1,367	
Hides and leather.	20	2				120			20	122	142		22	120
Household goods	8								8		8			
Iron, pig and bloom	22,577	43			420	3,839			23,862	3,882	29,744		22,455	7,289
Iron and steel, all other	115,490	2,481			385	480			172,209	2,961	175,170		99,543	75,627
Live stock	23	1							23	1	24		24	
Merchandise.	305,388	5,024			46,358	3,926			380,511	21,599	402,110		326,529	75,581
Oats.		305,343				17,032				331,430	331,430		310,870	20,560
Other mill products.		7,482								14,358	14,358		12,482	1,876
" packinghouse products	30								30		30		30	
" woods	673								673		673		673	
Ore, all other	2,345	4,702							2,345				5,247	6,728
" copper					45	16,511			45	16,511	16,556			16,556
" iron						22,476,048		158,611	15,758	22,654,029	22,669,789		19,372	22,650,417
Peas														
Petroleum.	17,753				2,880				58,903		58,903		18,164	40,739
Poultry, game and fish.	35	91							35	91	126		126	
Potatoes	1								1		1		1	
Pulpwood										2,301	2,301		2,301	

TABLE 7 (No. 2) GENERAL STATEMENT showing the Quantity of each Article Transported on the Welland canal during the Season of Navigation in 1911.

Articles.	From Canadian to Canadian Ports.				From Canadian to United States Ports.				From United States to United States Ports.				From United States to Canadian Ports.				Tons.		From of Cargo.	
	Up.		Down.		Up.		Down.		Up.		Down.		Up.		Down.		Up.	Down.	Canadian.	United States.
	19,680	15	14,622	407	79,569	6,063	731	221,782	2,160	24,151	500	79,569	246,964	372,718	273,932	273,932	19,680	15	19,695	19,695
Agricultural implements.....																				
All other animal.....																				
Barley.....																				
Buckwheat.....																				
Cement, bricks, &c.....																				
Coal, hard.....																				
" soft.....																				
Coke.....																				
Corn.....																				
Dressed meats.....																				
Flax.....																				
Flour.....																				
Fruits and vegetables.....																				
Hay.....																				
Hides and leather.....																				
Household goods.....																				
Iron, pig and bloom.....																				
Iron and steel, all other.....																				
Live stock.....																				
Merchandise.....																				
Oats.....																				
Other mill products.....																				
" packing house products.....																				
" woods.....																				
Ore, all other.....																				
" copper.....																				
" iron.....																				
Peas.....																				
Petroleum.....																				
Poultry, game and fish.....																				
Potatoes.....																				
Pulpwood.....																				

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Rye	112	693	26,331	7,657	1,042	112	112	112	112
Sawed lumber	86	1,042	26,331	7,657	1,042	34,767	35,809	1,821	33,988
Shingles			60			60	60		60
Square timber	5,582			4,460		10,042	10,042	4,265	5,777
Sugar and salt	4,099	50	26,303	820	30,452	5,436	35,888	9,585	26,303
Wheat	494,457		1,950	62,875		562,282	562,282	493,321	68,961
Wines, liquors and beers	1,047	288	230	101	5,400	1,148	6,548	6,320	928
Wool	369	20	9		389	9	398	389	9
Total freight	318,764	190,101	175,752	690,873	842,919	1,691,710	2,537,629	1,296,480	1,241,149

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Kyo	112	1,042	693	26,331	7,657	1,042	112	112	112	112
Sawed lumber		1,042	693	26,331	7,657	1,042	34,681	35,723	1,735	33,988
Shingles				60			60	60		60
Square timber	3,577				4,460		10,037	10,037	4,260	5,777
Sugar and salt	4,616	50	26,303		820	30,452	5,436	35,888	9,585	26,303
Wheat	490,315			4,950	62,875		558,140	558,146	489,179	68,961
Wines, liquors and beers	1,047	288	230		101	5,406	1,148	6,548	6,320	228
Wool	369	20		9		389	9	398	389	9
Total freight	303,045	190,101	693	175,752	690,486	827,200	1,682,531	2,509,731	1,268,969	1,240,762

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Sawed lumber.....	86	86
Shingles.....
Square timber.....	5	5
Sugar and salt.....
Wheat.....	4,142	4,142
Wines, liquors and beers.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wool.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total Freight.....	15,719	.....	.....	.....	.....	.....	.....	.....	11,792	12,179	27,511
								387	15,719	27,898	387

TABLE 7—(No. 5).—GENERAL STATEMENT showing the Quantity of each Article Transported on the St. Lawrence canals during the Season of Navigation in 1911.

Articles.	From Canadian Ports.				From Canadian to United States Ports.				From United States to Canadian Ports.				Tons.		Origin of Cargo.	
	Up.		Down.		Up.		Down.		Up.		Down.		Up.	Down.	Canadian.	United States.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
Agricultural implements.....	219	38							219				38	257	257	..
All other animal.....	1,387	5,659							1,387				5,659	7,046	7,043	3
Barley.....	424	15,567							424				15,567	15,991	15,991	
Buckwheat.....	1	70							1				70	71	71	
Cement, bricks, &c.....	106,791	80,401							106,799				80,401	187,200	181,977	5,223
Coal, hard.....	7,518	3,354							7,518		419,294		422,648	430,166	7,085	123,081
" soft.....	191,433	4,820							191,433		350,827		355,647	547,080	191,933	355,117
Coke.....																
Corn.....	2,360	25,417							2,360		129,376		154,793	157,153	27,777	129,376
Dressed meats.....	19	17							20				17	37	36	1
Flax.....		11,696											11,696	11,696	11,696	
Flour.....	1,557	51,316							1,557		661		51,977	53,534	52,873	661
Fruits and vegetables.....	168	6,185							169				6,185	6,354	6,353	1
Hay.....	12,738	10,884							12,738				10,884	23,622	23,445	177
Hides and leather.....	7	43							9				43	52	52	
Household goods.....	691	1,075							691				1,075	1,766	1,766	
Iron, pig and bloom.....	7,756	303							7,881		2,900		3,203	11,084	8,184	2,900
Iron and steel, all other.....	90,638	9,603							90,638		29,426		39,029	129,667	100,421	29,246
Live stock.....	99	1,982							99				1,982	2,081	2,081	
Merchandise.....	102,827	30,168							112,786		3,249		34,529	147,315	142,116	5,199
Oats.....	5,163	151,601							5,163				151,601	156,764	155,840	924
Other mill products.....	8,314	3,112							8,314		1,876		4,988	13,302	11,426	1,876
" packing house products.....	304	84							304				84	388	388	
" woods.....	1,310	6,569							3,574				6,809	9,429	9,429	
Ore, all other.....	3,982	100							6,174				100	6,274	5,110	1,164
" copper.....																
" iron.....		8											8	8	8	
Peas.....	8	105							8				105	113	113	
Petroleum.....	2,526	18,887							2,691		33,651		52,538	55,229	21,505	33,724
Poultry, game and fish.....	37	42							37				42	79	79	
Potatoes.....	759	175							760				175	935	934	1
Pulpwood.....	3,570	125							310,300				135	310,435	310,435	

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Rye	34,597	126,262	7,790	36,745	17			300	42,404	163,307	205,711	205,404	307
Sawed lumber		16								16	16	16	
Shingles	168	24,442							168	24,442	24,610	24,610	
Square timber	15,112	3,380							15,112	3,380	18,492	18,324	168
Sugar and salt	20,592	492,419						50,544	20,592	542,963	563,555	511,841	51,714
Wheat	6,309	610	63						6,372	610	6,982	6,982	
Wines, liquors and beers	258	2							258	2	260	260	
Wool													
Total freight	629,642	1,086,547	328,732	38,085	194	12	302	1,022,104	958,960	2,146,748	3,105,708	2,063,861	1,041,847

TABLE 7 (No. 6)—(GENERAL STATEMENT showing the Quantity of each Through Article Transported on the St. Lawrence canals during the Season of Navigation in 1911.

Articles.	From Canadian to Canadian Ports.		From Canadian United States to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Origin of Cargo.	
	From Canadian to Canadian Ports.		From Canadian United States to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Canadian.	United States.
Agricultural implements	81								81		81	
All other animal	142	4,013							142	4,013	4,155	
Barley	408	14,853							408	14,853	15,261	
Buckwheat		58								58	58	
Cement, bricks, &c.	14,797	6,165							14,797	6,165	20,962	
Coal, hard	2,680						413,185		2,680	413,185	2,680	413,185
" soft	3,550	4,216					339,073		3,550	343,289	3,550	343,289
Corn												
Coke	280	4,863					129,376		280	134,239	5,143	129,376
Dressed meats		2								2	2	
Flax		11,696								11,696	11,696	
Flour	15	45,228					661		15	45,889	45,243	661
Fruits and vegetables	20	5,518							20	5,518	5,538	
Hay	276								276		276	
Hides and leather												
Household goods	283	855							283	855	1,138	
Iron, pig and bloom	4,977	61					2,000		5,102	2,961	5,163	2,900
Iron and steel, all other	71,478	5,515					29,426		71,478	34,941	77,173	29,246
Live stock	1	19							1	19	20	
Merchandise	88,549	20,451					3,076		98,312	23,527	127,267	3,602
Oats		147,180					1,876			147,180	146,256	924
Other mill produce	42	2,091							42	3,967	2,133	1,876
" packing house products.		15								15	15	
" woods		37							2,264	37	2,301	
Ore, all other									1,800		1,800	
" Copper												
" Iron												
Peas		41								41	41	
Petroleum	1,803	18,396					33,651		1,968	52,047	20,291	33,724
Poultry, game and fish	37								37		37	
Potatoes	137	8							137	8	145	
Pulpwood	3,150								309,880		309,880	

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Rye.....	825				7,790			300	8,615	8,915	8,615	300
Sawed lumber.....												
Shingles.....		3,360						3,360		3,360	3,360	
Square timber.....	6,520	2,515						2,515	6,520	9,035	9,035	
Sugar and salt		490,630						50,544		541,174	489,460	51,714
Wheat.....	5,244	592			63				5,307	5,899	5,899	
Wines, liquors and beers.....	258								258		258	
Wool												
Total freight	205,553	788,378			328,730			1,004,068	534,283	2,326,729	1,315,932	1,010,797

TABLE 7 (No. 7).—GENERAL STATEMENT showing the Quantity of each Way Article Transported on the St. Lawrence canals, during Season of Navigation in 1911.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.		Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.			Canadian.	United States.
Agricultural implements	138	38							138	38			176	
All other animal	1,245	1,646							1,245	1,646			2,888	3
Barley	16	714							16	714			730	
Buckwheat	1	12							1	12			13	
Cement, bricks, &c	91,994	71,236		8					92,002	71,236			163,238	5,223
Coal, hard	4,838	3,354					6,109		4,838	9,463			14,301	9,896
" soft	187,883	604					11,754		187,883	12,358			190,241	11,858
Coke														
Corn	2,080	20,554							2,080	20,554			22,634	
Dressed meats	19	15		1					20	15			34	1
Flax														
Flour	1,542	6,088							1,542	6,088			7,630	
Fruits and vegetables	148	667		1					149	667			815	1
Hay	12,462	10,884							12,462	10,884			23,346	177
Hides and leather	7	43		2					9	43			52	
Household goods	408	220							408	220			628	
Iron, pig and bloom	2,779	242							2,779	242			3,021	
Iron and steel, all other	19,160	4,088							19,160	4,088			23,248	
Live stock	98	1,963							98	1,963			2,061	
Merchandise	14,278	9,717		1,100		12			14,444	11,002			25,446	1,597
Oats	5,163	4,421							5,163	4,421			9,584	
Other mill products	8,272	1,021							8,272	1,021			9,293	
" packing house products														
" woods	304	69							304	69			373	
" other	1,310	6,532		240					1,310	6,772			8,082	954
" copper	3,982	100					392		4,374	100			3,310	1,164
" iron		8								8			8	
Peas	8	64							8	64			72	
Petroleum	723	191							723	191			1,214	
Poultry, game and fish		42								42			42	
Potatoes	622	167		1					623	167			789	1

TABLE 7 (No. 8).—GENERAL STATEMENT showing the Quantity of each Article Transported on the Chambly canal during the Season of Navigation in 1911.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.		Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Canadian.	United States.
Agricultural implements.....	167	36					6	6	167	209	209	
All other animal												
Barley												
Buckwheat	371	30										
Cement, bricks, &c	107				10,952		371	10,982	11,353	401	401	10,952
Coal, hard	35				118,119		107	118,119	118,226	107	107	118,119
" soft					436		35	436	471	35	35	436
Coke												
Corn	47	98					17	98	145	145	145	
Dressed meats												
Flax	1,032						1,032		1,032	1,032	1,032	
Flour	899	1,785					899	1,785	2,684	2,684	2,684	
Fruits and vegetables	404	8,424					28,400	8,424	36,824	36,824	36,824	
Hay												
Hides and leather	108	13					108	13	121	121	121	
Household goods	153						153		153	153	153	
Iron, pig and bloom	826	5					826	5	831	831	831	
Iron and steel, all other	2	243					2	245	245	245	245	
Live stock	1,393	700					1,563	10,261	11,824	2,263	2,263	9,561
Merchandise	4	1,034					4	1,034	1,038	1,038	1,038	
Oats	108						108		108	108	108	
Other mill products	62	4					62	4	66	66	66	
" Packing house products	240	239					240	239	479	479	479	
" Woods	75	18					75	1,921	1,996	93	93	1,903
Ore, all other												
" Copper												
" Iron												
Peas												
Petroleum	80						80		80	80	80	
Poultry, game and fish	3	1					3	1	4	4	4	
Potatoes	58	1					58	4	62	62	62	
Pulpwood	289,728						289,728		289,728	289,728	289,728	
									11,844	11,844		11,844

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Sawed lumber..	4,167	81	4,167	81	4,248	4,248
Shingles.	750	..	750	..	750	750
Square timber.	559	..	559	..	559	559
Sugar and salt	1,291	80	1,291	80	1,371	1,371
Wheat.	..	..	..	..	..	..
Wines, liquors and beers.	210	12	210	12	222	222
Wool.	..	..	..	..	..	..
Total freight	29,177	46,121	29,177	46,121	75,298	75,298

TABLE 7 (No. 10).—(GENERAL STATEMENT showing the Quantity of each Article Transported on the Murray canal during the Season of Navigation in 1911.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Canadian.	United States.
Agricultural implements												
All other animal	16	76							10	76		86
Barley		144								144		144
Buckwheat												
Cement, bricks, &c.	78,000								78,000		78,000	
Coal, hard.	474	371			2,823				474	3,194		3,668
" soft	317	250			849				317	1,099		1,416
Coke												
Corn												
Dressed meats	1	3							1	3		4
Flax												
Flour												
Fruits and vegetables	530	433							530	433		963
Hay												
Hides and leather												
Household goods	17	11			1				17	12		28
Iron, pig and bloom.	35	367							35	367		402
Iron and steel	21	715							21	715		718
Live stock	4	4							4	4		8
Merchandise.	59,778	4,328			7				59,780	4,335	64,082	33
Oats												
Other mill products.												
" packing house products.		10								10		
" woods	5								5			
Ore, all other	12,130								12,130		12,130	
" copper.												
" iron												
Peas												
Petroleum	29	45							29	45		54
Poultry, game and fish	5								5			5
Potatoes		2								2		2
Pulpwood	1,569								1,569		1,569	
Rye												
Sawed lumber	35								35		28	7

TABLE 7 (No. 11) GENERAL STATEMENT showing the Quantity of each Article Transported on the Ottawa canals during the Season of Navigation in 1911.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.		Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.
	Up. Down.		Up. Down.		Up. Down.		Up. Down.		Up. Down.		Up. Down.		Up. Down.	
Agricultural implements.	121	26							121	26	147	147		
All other animal	68	1,595							68	1,595	1,663	1,663		
Barley														
Buckwheat														
Cement, bricks, &c	3,081	45,225							3,081	45,225	48,306	48,306	17,970	386
Coal, hard	888						3,085		3,973		3,973	3,973	13	3,960
" soft	31,139								31,139		31,139	31,139	29,617	1,522
Coke														
Corn	87								87		87	87	87	
Dressed meats.....	18								18		20	20	20	
Flax											2	2	2	
Flour	603	27							603	27	630	630	630	
Fruits and vegetables.	99	618							99	618	717	717	717	
Hay		6,478				91				6,569	6,569	6,569	6,569	
Hides and leather		4								4	4	4	4	
Household goods.....	305	28							305	28	333	333	333	
Iron, pig and bloom.....	820	4							820	4	824	824	824	
Iron and steel, all other	857	29							857	29	886	886	886	
Live stock	52	384							52	384	436	436	436	
Merchandise	6,150	1,162							6,150	1,162	10,312	10,312	9,792	520
Oats	15	598							15	598	613	613	613	
Other mill products.....	58	433							58	433	491	491	491	
" packing house products.	290	16							290	16	306	306	306	
" woods	184	21,443				240			184	21,683	21,867	21,867	21,867	
Ore, all other	3,300						1,161		4,461		4,461	4,461	3,000	1,461
" copper														
" iron	3								3		3	3	3	
Peas														
Petroleum	667	77							667	77	744	744	744	
Poultry, game and fish.....		38								38	38	38	38	
Potatoes	518	138							518	138	656	656	656	
Pulpwood.....														
Rye		2								2	2	2	2	
Sawed lumber	211	133,623				41,009			211	174,042	174,253	174,253	174,253	

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Shingles	76	16	3,585	16	76	16	3,585	16
Square timber	2,793	49	49	2,793	49	49
Sugar and salt	1,041	17	17	1,041	17	17
Wheat	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wines, liquors and beers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wool
Total freight	53,453	221,029	41,340	4,249	57,702	262,309	320,071	312,269	7,802

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No. 7. (No. 12.)—GENERAL STATEMENT showing the Quantity of each article transported on the Rideau canal during the Season of Navigation in 1911.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Canadian.	United States.
Agricultural implements.	430	323							430	323	753	
All other animal.	300	1,715							300	1,715	2,015	
Barley.											8	
Buckwheat.		8										
Cement, bricks, &c.	46,479	50,498							46,479	50,498	96,977	
Coal, hard.	2,055	364							2,055	6,662	371	260
" soft.	1,102	366							1,102	4,086	1,365	8,346
Coke.												3,823
Corn.	17	260							17	260	217	60
Dressed meats.	87	64							87	64	151	
Flax.												
Flour.	132	380							132	380	512	
Fruits and vegetables.	148	184							148	184	332	
Hay.	2,663	65							2,663	65	2,728	
Hides and leather.	4	11							4	11	15	
Household goods.	408	217							408	217	625	
Iron, pig and bloom.	848	44							848	44	892	
Iron and steel, all other.	1,006	245							1,006	245	1,251	
Live stock.	17	13							17	13	30	
Merchandise.	4,983	3,771							4,983	3,771	8,754	
Oats.	74	777							74	777	851	
Other mill products.	105	303							105	303	408	
" packing house products.	346	87							346	87	433	
" woods.	5,137	1,084							5,137	1,084	6,221	
Ore, all other.	113	154							113	154	267	
" copper.												
" iron.												
Peas.	7	4							7	4	11	
Petroleum.	780	406							780	406	1,186	
Poultry, game and fish.	12	16							12	16	28	
Potatoes.	292	34							292	34	326	
Pulpwood.	1,425	1,422							1,425	1,422	2,847	
Rye.												
Sawed lumber.	4,359	20,248							4,359	20,248	24,607	

TABLE 7 (No. 13).—GENERAL STATEMENT showing the Quantity of each Article Transported on the Trent Valley canals during the Season of Navigation in 1911.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.		Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Total Tons.		Canadian.	United States.
Agricultural implements														
All other animal	28	15							28	15	43		43	
Barley	57	27							57	27	84		84	
Buckwheat	10	5							10	5	15		15	
Cement, bricks, &c.	5								5		5		5	
Coal, hard.	1,914	130							1,914	130	5,044		5,044	
" soft.	332								332		332		332	
Coke	151								151		151		151	
Corn														
Dressed meats														
Flax														
Flour	41	33							41	33	74		74	
Fruits and vegetables	4								4		4		4	
Hay	25								25		25		25	
Hides and leather	3								3		3		3	
Household goods	49	22							49	22	71		71	
Iron, pig and bloom	5	40							5	40	45		45	
Iron and steel, all other	57	106							57	106	163		163	
Live stock	266	11							266	11	310		310	
Merchandise	1,710	5,417							1,710	5,417	7,127		7,127	
Oats	16								16		16		16	
Other mill products	48	47							48	47	95		95	
" packing house products														
" woods	12,620	5,868							12,620	5,868	18,488		18,488	
Ore, all other		11,263								11,263	11,263		11,263	
" copper														
" iron														
Pears	27	6							27	6	33		33	
Petroleum	18	1							18	1	19		19	
Poultry, game and fish														
Potatoes	129								129		129		129	
Pulpwood	1,385	7,080							1,385	7,080	8,465		8,465	
Rye														
Sawed lumber	1,093	1,460							1,093	1,460	2,553		2,553	

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Shingles,	35	69	104	104
Square timber		1,732	1,732	1,732
Sugar and salt	4	3	7	7
Wheat.....	547	8	555	555
Wines, liquors and beers,	26	6	32	32
Wool..				
Total freight	23,408	33,382	57,200	57,200

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Sawed lumber.....	1,096	1,008	1,096	1,008	2,104	2,104
Shingles.....
Square timber.....
Sugar and salt.....
Wheat.....	.....	.....	.....	.....	.....	.....	.....	.....
Wines, liquors and beer..
Wool.....
Total freight.....	40,000	6,532	40,603	6,532	47,135	47,135

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TABLE 8.—STATEMENT showing the Classified Tonnage of all kinds of Vessels

SAULT STE.

CANADIAN.							
Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	5,000 to 5,142 tons	1	5,142	1	5,000 to ——— tons		
2	4,000 " 5,000 "	2	9,000	2	4,000 " 5,000 "		
3	3,000 " 4,000 "	2	6,800	3	3,000 " 4,000 "		
4	2,000 " 3,000 "	9	21,500	4	2,000 " 3,000 "		
5	1,000 " 2,000 "	62	80,500	5	1,000 " 2,000 "		
6	Under 1,000 "	49	14,680	6	Under 1,000 "	21	4,100
Total.		125	137,622	Total.		21	4,100

WELLAND

1	250 to 1,597 tons.	81	79,800	1	250 to 1,226 tons.	18	12,550
2	200 " 249 "	3	600	2	200 " 249 "	2	425
3	150 " 199 "	2	300	3	150 " 199 "	1	150
4	100 " 149 "	2	250	4	100 " 149 "	10	1,100
5	50 " 99 "	4	330	5	50 " 99 "	3	200
6	Under 50 "	16	410	6	Under 50 "	2	10
	Total.	108	81,790		Total.	36	14,435

ST. LAWRENCE

1	250 to 1,597 tons.	99	87,790	1	150 to 1,184 tons.	96	46,220
2	200 " 249 "	9	1,940	2	200 " 249 "	10	2,140
3	150 " 199 "	9	1,540	3	150 " 199 "	32	5,140
4	100 " 149 "	29	3,080	4	100 " 149 "	90	10,920
5	50 " 99 "	33	2,320	5	50 " 99 "	78	5,800
6	Under 50 "	86	1,530	6	Under 50 "	16	640
	Total.	265	98,200		Total.	322	70,860

RIDEAU, OTTAWA

1	250 to 370 tons.	5	1,450	1	250 to 410 tons.	3	980
2	200 " 249 "	1	230	2	200 " 249 "	8	1,670
3	150 " 199 "	7	1,200	3	150 " 199 "	37	6,030
4	100 " 149 "	11	1,220	4	100 " 149 "	52	6,280
5	50 " 99 "	15	980	5	50 " 99 "	29	2,115
6	Under 50 "	64	985	6	Under 50 "	18	380
	Total.	103	6,065		Total.	147	17,455

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passed through the following canals during the Season of Navigation, 1911.

MARIE CANAL.

UNITED STATES.

Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	5,000 to 6,498 tons	56	234,898	1	5,000 to ——— tons		
2	4,000 " 5,000 "	77	452,100	2	4,000 " 5,000 "	1	44,000
3	3,000 " 4,000 "	110	348,000	3	3,000 " 4,000 "	5	16,000
4	2,000 " 3,000 "	39	92,300	4	2,000 " 3,000 "	6	15,400
5	1,000 " 2,000 "	54	86,800	5	1,000 " 2,000 "	1	1,000
6	Under 1,000 "	34	10,905	6	Under 1,000 "	15	6,525
	Total.	370	1,225,003		Total.	28	43,625

CANAL.

1	250 to 1,993 tons.	66	65,275	1	250 to 1,599 tons	26	21,750
2	200 " 249 "	5	1,050	2	200 " 249 "	4	825
3	150 " 199 "	2	325	3	150 " 199 "		
4	100 " 149 "	1	125	4	100 " 149 "		
5	50 " 99 "	6	440	5	50 " 99 "	3	260
6	Under 50 "	24	540	6	Under 50 "	4	70
	Total.	104	67,755		Total.....	37	22,905

CANAL.

1	250 to 1,640 tons.....	27	26,086	1	250 to 1,316 tons.	14	8,422
2	200 " 249 "			2	200 " 249 "		
3	150 " 199 "	1	180	3	150 " 199 "		
4	100 " 149 "	8	940	4	100 " 149 "	38	4,310
5	50 " 99 "	4	235	5	50 " 99 "	58	5,674
6	Under 50 "	20	230	6	Under 50 "		
	Total.	60	27,671		Total.....	110	18,406

AND CHAMBLY CANALS.

1	250 to ——— tons			1	250 to ——— tons		
2	200 " 249 "			2	200 " 249 "		
3	150 " 199 "			3	150 " 199 "	9	1,430
4	100 " 149 "			4	100 " 149 "	174	18,670
5	50 " 99 "			5	50 " 99 "	481	46,340
6	Under 50 "	1	30	6	Under 50 "	1	5
	Total....	1	30		Total....	665	66,445

APPENDIX

DOMINION CANALS

The canal systems of the Dominion, under government control in connection with lakes and navigable rivers, are as follows:—

First—The through route between Montreal and the head of Lake Superior (14 feet minimum depth of water.)

	Miles.
1. Lachine canal..	8½
Lake St. Louis and River St. Lawrence..	16
2. Soulanges canal..	14
Lake St. Francis and River St. Lawrence..	33
3. Cornwall canal..	11
River St. Lawrence..	5
4. Farran's Point canal..	1½
River St. Lawrence..	10
5. Rapide Plat canal..	3¾
River St. Lawrence..	4
6. Galops canal..	7½
River St. Lawrence and Lake Ontario..	236
7. Welland canal..	26¾
Lake Erie, Detroit river, Lake St. Clair, Lake Huron, &c.	580
8. Sault Ste. Marie canal..	1½
Lake Superior to Port Arthur..	266
Total..	1,223 ¹⁷ / ₂₄
To Duluth..	1,357
Chicago..	1,286

Second.—Ottawa to Lake Champlain.

1. Grenville. 2. Carillon. 3. St. Anne's. 4. Chambly. 5. St. Ours canals.

Third.—Ottawa to Kingston and Perth.

1. Rideau canal.

Fourth.—Lake Ontario at Trenton to Lake Huron at mouth of River Severn.

1. Trent canal (not completed).

Fifth.—Ocean to Bras d'Or lakes.

1. St. Peter's canal.

RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle Isle to Port Arthur, at the head of Lake Superior, a distance of 2,200 statute miles. The distance to Duluth is 2,343 statute miles. The distance to Chicago, 2,272 miles.

From the Straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 986 miles. From Quebec to Montreal, the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through Lake St. Peter, vessels drawing more than from ten to twelve feet were formerly barred from passage for the greater part of the season of navigation. In 1826, the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year, the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the channel at low water was 10 feet 6 inches. By the year 1869, this depth had been increased to 20 feet, by 1882 to 25 feet, and by the close of 1888 the depth of 27½ feet, at low water, was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the government of Canada, which in 1888, under the provisions of the Act 51 Vic., ch. 5, of that year, assumed the indebtedness. The channel has a minimum width of 300 feet, extending to 550 feet at points of curvature. The channel is lighted and buoyed.

Navigation, which is closed by ice during the winter months, opens about the end of April.

Montreal has by this work been placed at the head of ocean navigation, and here the canal systems of the River St. Lawrence begin, overcoming the various rapids by which the river channel upwards is obstructed, and giving access through the St. Lawrence canals, the Welland canal, the great lakes and the Sault Ste. Marie canal, to the head of Lake Superior.

The difference in level between the point on the St. Lawrence, near Three Rivers, where tidal influence ceases, and Lake Superior is about 600 feet.

The Dominion canals, constructed between Montreal and Lake Superior, are the Lachine, Soulanges, Cornwall, Farran's Point, Rapide Plat, Galops, Murray, Welland and Sault Ste. Marie. Their aggregate length is 73 miles; total lockage (or height directly overcome by locks), 551 feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior is 48. The Soulanges canal takes the place of the Beauharnois canal; the latter may be abandoned for navigation purposes.

Communication between Lakes Huron and Superior is obtained by means of the Canadian Sault Ste. Marie canal, and also by the St. Mary's Falls canal, situated on the United States side of the River St. Mary. Both these canals are free of toll.

It is important to note that the enlargement of the canals on the main route between Montreal and Lake Erie comprises locks of the following minimum dimensions: Length, 270 feet; width, 45 feet; depth of water on sills, 14 feet. The length of the vessels to be accommodated is limited to 255 feet. At Farran's, in the canal of that name, the lock is 800 feet long. A similar lock is built at Iroquois on the Galops canal, the object being to pass a full tow at one lockage.

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LACHINE CANAL.

First construction	commenced.....	1821
"	completed.....	1825
First enlargement	commenced.....	1843
"	completed.....	1848
Second enlargement	commenced.....	1873
"	completed.....	1901
Length of canal.....		8½ statute miles.
Number of locks.....		5
Dimensions of locks.....		270 feet by 45 feet.
Total rise of lockage.....		45 feet.
Depth of water	{at two locks.....	18 "
on sills.	{at three locks.....	14 "
Average width of new canal.....		150 "

The old lift locks, 200 feet by 45 feet, are still available, with 9 feet of water on mitre sills.

The canal consists of one channel, with two distinct systems of locks, the old and the enlarged. There are two lock entrances at each end.

The canal extends from the city of Montreal to the town of Lachine, overcoming the St. Louis rapids, the first of the series of rapids which bars the ascent of the River St. Lawrence. They are 986 miles distant from the Straits of Belle Isle.

SOULANGES CANAL.

Construction commenced.....	1892
Open for traffic.....	1899
Length of canal.....	14 statute miles.
Number of locks	{lift..... 4
	{guard..... 1
Dimensions of locks.....	280 feet by 45 feet.
Total rise of lockage.....	84 feet
Depth of water on sills.....	15 "
Breadth of canal at bottom.....	100 "
Breadth of canal at water surface.....	164 "
Number of arc lights.....	219 of 2,000 c. p. each.

The canal extends from Cascade point to Coteau Landing, overcoming the Cascade Rapids, Cedar rapids and Coteau rapids.

From the head of the Lachine to the foot of the Soulanges, the distance is sixteen miles.

CORNWALL CANAL.

First commenced, 9 feet.....	1844
" opened.....	1847
Enlargement commenced.....	1897
" completed.....	1900
Length of canal.....	11 statute miles.
Number of locks.....	6
Dimensions of locks.....	270 feet by 75 feet.
Total rise of lockage.....	48 feet.
Depth of water on sills.....	14 "
Breadth of canal at bottom.....	100 "
Breadth of canal at water surface.....	164 "

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The old lift locks, 200 feet by 45 feet, are also available, with nine feet of water on mitre sills.

From the head of the Soulanges to the foot of the Cornwall canal there is a stretch through Lake St. Francis, of 32½ miles, which is being made navigable for vessels drawing fourteen feet.

The Cornwall canal extends past the Long Sault rapids from the town of Cornwall to Dickinson's landing.

WILLIAMSBURG CANALS.

The Farran's Point, Rapide Plat and Galops canals are collectively known as the Williamsburg Canals.

FARRAN'S POINT CANAL.

First commenced, 9 feet	1844
" opened	1847
Enlargement commenced.. .. .	1897
" completed.. .. .	1900
Length of canal.. .. .	1½ miles.
Number of locks	1
New lock	800 feet by 45 feet
Old lock	200 "
Total rise or lockages	3½ feet.
Depth of water on sills of new lock	14 "
Depth of water on sills of old lock	9 "
Breadth of canal at bottom	90 "
Breadth of canal at water surface.. .. .	154 "

From the head of the Cornwall canal to the foot of Farran's Point canal, the distance on the River St. Lawrence is five miles. The latter canal enables vessels ascending the river to avoid Farran's Point rapid, passing the full tow at one lockage. Descending vessels run the rapids with ease and safety.

RAPIDE PLAT CANAL.

First commenced, 9 feet	1844
" opened	1847
Enlargement commenced	1884
" completed	1897
Length of canal.. .. .	3½ miles.
Number of locks	2
Dimensions of locks	270 feet by 45 feet.
Total rise in lockage.. .. .	11½ feet.
Depth of water on sills.. .. .	14 "
Breadth of canal at bottom.. .. .	80 "
Breadth of canal at surface of water.	152 "

The old lift lock, 200 feet by 45, is also available, with nine feet of water on mitre sills.

From the head of Farran's Point canal to the foot of Rapide Plat canal, there is a navigable stretch of 10½ miles. This canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

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GALOPS CANAL.

First commenced, 9 feet.....	1844
Opened.....	1846
Enlargement commenced.....	1888
“ completed.....	1903
Length of canal.....	7½ miles.
Number of locks.....	3
Dimensions of locks. { one of which is }	2-270 by 45.
{ a guard lock. }	1-800 by 45.
Total rise of lockage.....	15½ feet.
Depth of water on sills.....	14 “
Breadth of canal at bottom.....	80 “
Breadth of canal at surface of water.....	144 “

From the head of Rapide Plat canal to Iroquois, at the foot of the Galops canal, the St. Lawrence is navigable 4½ miles. The canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

MURRAY CANAL.

Construction begun.....	1882
Completed.....	1890
Length between eastern and western pier heads.....	5½ miles.
Breadth at bottom.....	80 feet.
Breadth at water surface.....	120
Depth below lowest known lake level.....	11
No locks.	

This canal extends through the Isthmus of Murray, giving connection westward between the head waters of the Bay of Quinte and Lake Ontario, and thus enabling vessels to avoid the open lake navigation.

WELLAND CANAL.

Main line from Port Dalhousie, Lake Ontario, to Port Colborne, Lake Erie.

	Old Line.	Enlarged or New Line.
Length of canal..	27½ miles	26¾ miles
Pairs of guard-gates (formerly 3) .. .		2
Number of locks { lift.....	26	25
{ guard.....	1	1
Dimensions..... { 1 lock 200 x 45	270 feet x 45 feet.	
{ 1 lock 200 x 45		
{ 1 (tidal) 230 x 45		
{ 24 locks 150 x 26 ft. 6 in.		
Total rise or lockage .. .	326¾ feet	326¾ feet.
Depth of water on sills.. . . .	10¼ “	14 “
Construction commenced, 8 feet.. . . .		1824
“ Completed.. . . .		1833
Enlargement commenced, 14 feet.. . . .		1872
“ completed.. . . .		1887

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WELLAND RIVER BRANCHES.

Length of canal—

Port Robinson cut to River Welland	2,622 feet.
From the canal at Welland to the river, via lock at Aqueduct	300 “
Chippewa cut to River Niagara	1,020 “
Number of locks—one at Aqueduct and one at Port Robinson	2
Dimensions of locks	150 by 26½ feet.
Total lockage from the canal at Welland down to River Welland	10 feet.
Depth of water on sills	9 feet 10 inches.

GRAND RIVER FEEDER.

Length of canal	21 miles.
Number of locks	2
Dimensions of locks	} 1 of 150 by 26½ feet. 1 of 200 by 45 feet.
Total rise or lockage	
Depth of water on sills	7 to 8 feet.
	9 feet.

PORT MAITLAND BRANCH.

Length of canal	1½ miles.
Number of locks	1
Dimensions of locks	185 feet by 45 feet.
Total rise or lockage	7½ feet.
Depth of water on sills	11 “

The Welland canal has two entrances from Lake Ontario, at Port Dalhousie, one for the old, the other for the new canal.

From Port Dalhousie to Allanburg, 11½ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

From Allanburg to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

From the head of the Welland canal there is a deep water navigation through Lake Erie, the Detroit river, Lake St. Clair, the St. Clair river, Lake Huron and River St. Mary to the Sault canal, a distance of about 580 miles. From the Sault the distance through Lake Superior to Port Arthur is 266 miles, and to Duluth 400 miles.

SAULT STE. MARIE CANAL.

Construction commenced	1888
Opened for traffic	1895
Length of canal, between the extreme ends of the entrance piers	5,967 feet.
Number of locks	1
Dimensions of locks	900 feet by 60 feet.
Depth of water on sills (at lowest known water level)	20 feet 3 inches.
Total rise or lockage	18 feet.
Breadth of canal at bottom	141 feet 8 inches.
Breadth at surface of water	150 feet.

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This canal has been constructed through St. Mary's island, on the north side of the rapids of the River St. Mary, and, with that river, gives communication on Canadian territory between Lakes Huron and Superior. The masonry pier of the bridge carrying the Canadian Pacific Railway over the canal, which stood in the channel of the canal, forming an obstruction to navigation, has been removed; the swing now spanning the full width of the channel or prism of the canal.

MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine canal, the navigation section of the lower River Ottawa, and the Ottawa canals, to the city of Ottawa; thence by the River Rideau and the Rideau canal to Kingston, on Lake Ontario—a total distance of 245½ miles.

After leaving the Lachine canal the works constructed to overcome difficulties of navigation are:—

Ottawa River Canals.

- The Ste. Anne's lock.

Carillon canal.
- Grenville canal.

Rideau canal.

The total lockage (not including that of the Lachine canal) is 509 feet (345 rise, 164 fall)—and the number of locks is 55.

The following table exhibits the intermediate distances from Montreal harbour:—

Sections of Navigation.	Interme- diate Distance.	Total Distance, from Montreal.
	Miles.	Miles.
The Lachine canal...	8½	
From Lachine to Ste. Anne's lock.....	15	23
Ste. Anne's lock and piers... ..	½	23
Ste. Anne's lock to Carillon canal.....	27	50
The Carillon canal.....	¼	51
The Carillon to Grenville canal.....	6¼	57
The Grenville canal.....	5¼	63
From the Grenville canal to entrance of Rideau navigation.....	56	119
Rideau navigation ending at Kingston.....	126½	245

STE. ANNE'S LOCK.

Construction commenced..	1814.
“ completed..	1816
Rebuilt of wood..	1833
“ in masonry..	1843.

	Old Lock.	New Lock.
Length of canal..	½ mile.	½ mile.
Number of locks..	1	1
Dimensions of locks..	190 x 45 feet.	200 x 45 feet.
Total rise or lockage..	3 feet.	3 feet.
Depth of water on sills..	6 “	9 “

This work, with guide piers above and below, surmounts the Ste. Anne's rapids between Ile Perrot and the head of the Island of Montreal, at the outlet of that portion of the River Ottawa which forms the Lake of Two Mountains, 23½ miles from Montreal harbour.

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THE CARILLON CANAL.

Construction commenced.. . . .	1819
“ completed.. . . .	1833
Enlargement commenced.. . . .	1871
“ completed.. . . .	1887
Length of canal.. . . .	$\frac{3}{4}$ mile.
Number of locks.. . . .	2
Dimensions of locks.. . . .	200 x 45 feet.
Total rise or lockage.. . . .	16 feet.
Depth of water on sills.. . . .	9 “
Breadth of canal at bottom.. . . .	100 “
Breadth of canal at water surface.. . . .	110 “

This canal overcomes the Carillon rapids.

From Ste. Anne’s lock to the foot of the Carillon canal there is navigable stretch of 27 miles, through the Lake of Two Mountains and the River Ottawa.

By the construction of the Carillon dam across the River Ottawa the water at that point is raised 9 feet, enabling the river above to be used for navigation.

GRENVILLE CANAL.

Construction commenced.. . . .	1819
“ completed.. . . .	1833
Enlargement commenced.. . . .	1871
“ completed.. . . .	1887
Length of canal.. . . .	$5\frac{3}{4}$ miles.
Number of locks.. . . .	5
Dimensions of locks.. . . .	200 x 45 feet.
Total rise or lockage.. . . .	43 $\frac{3}{4}$ feet.
Depth of water on sills.. . . .	9 “
Breadth of canal at bottom.. . . .	40 to 50 feet.
Breadth of canal at surface of water.. . . .	50 to 80 “

This canal, by which the Long Sault rapids are avoided, is about 56 miles below the city of Ottawa, up to which point the River Ottawa affords unimpeded navigation.

RIDEAU NAVIGATION.

Construction commenced.. . . .	1826
“ completed.. . . .	1832

The Rideau system connects the River Ottawa, at the city of Ottawa, with the eastern end of Lake Ontario, at Kingston.

Length of navigation waters.. . . .	126 $\frac{1}{2}$ miles.
Number of locks going from Ottawa to Kingston. {	35 ascending.
	14 descending.
Total lockage.....446 $\frac{1}{2}$ feet {	282 $\frac{1}{2}$ rise and
	164 fall } at high water.
Dimensions of locks.. . . .	134 x 33 feet.
Depth of water on sills.. . . .	5 feet.
Navigation depth through the several reaches.. . .	4 $\frac{1}{2}$ “
Breadth of canal reaches at bottom.. . . . {	60 feet in earth.
	54 feet in rock.
Breadth of canal at surface of water.. . . .	80 feet in earth.

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PERTH BRANCH.

Construction commenced..	1883
“ completed..	1892
Length of canal..	7 miles.
Number of locks..	2
Dimensions of locks..	134 feet x 33 feet.
Total rise or lockage..	26 “
Depth of water on sills..	5 “ 6 inches.
Length of dam..	200 “
Breadth of canal at bottom..	40 “
Breadth of canal at surface of water..	{ 40 “ in rock. 60 “ in clay.

The Perth branch of the Rideau canal affords communication between Beveridge's bay, on Lake Rideau and the town of Perth.

The summit level of the Rideau system is at upper Lake Rideau, but several of the descending reaches are also supplied by waters which have been made tributary to them. The following description gives the sources of supply:—

From the summit, the route towards Ottawa follows the Rideau river, and that towards Kingston follows the River Cataraqui. The supply of water for the canal is derived from the reserves given in detail below.

These may be divided into three systems, viz.:—

1. The summit level, supplied by the Wolfe lake system.
2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau.
3. The southwest descending level to Kingston, supplied by the Mud lake system formerly known as the Devil lake system, discharging into Lake Openicon.

Lake Openicon receives the waters of Buck lake and Rock lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow into Cranberry lake, which, discharging through Round Tail outlet, forms the River Cataraqui. The river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the Rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu, through the St. Ours lock to the basin of Chambly; thence, by the Chambly canal, to St. Johns, and up the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of Lake Champlain is entered, and connection is obtained with the River Hudson, by which the city of New York is directly reached. From the boundary line to New York the distance is 330 miles.

The following table shows the distances between Sorel and New York:—

Section of Navigation.	Inter- mediate Distance.	Total Distances.
	Miles.	Miles.
Sorel to St. Ours lock.....	14	14
St. Ours lock to Chambly canal.....	32	46
Chambly canal.....	12	58
Chambly canal to boundary line.....	23	81
Boundary line to Champlain canal.....	111	192
Champlain canal to junction with Erie canal.....	66	258
Erie canal, from junction to Albany.	7	265
Albany to New York.....	146	411

ST. OURS LOCK DAM.

Construction commenced..	1844
“ completed..	1849
Length..	$\frac{1}{8}$ mile.
Number of locks..	1
Dimensions of lock..	200 feet by 45 feet.
Total rise of lockage..	5 “
Depth of water on sills..	7 feet at low water.
Length of dam in eastern channel..	300 “
Length of dam in western channel..	690 “

At St. Ours, 14 miles from Sorel, the River Richelieu is divided by a small island into two channels. The St. Ours lock is in the eastern channel.

There is a navigable depth in the Richelieu of 7 feet between St. Ours lock and Chambly basin, a distance of 32 miles.

CHAMBLY CANAL.

Construction commenced..	1831
“ completed..	1843
Length of canal..	12 miles.
Number of locks..	9
Dimensions of locks:—	
Guard lock, No. 1 at St. Johns.....	122 feet.
Lift “ 2	124 “
“ “ 3, 4, 5, 6	118 “
“ “ 7, 8, 9 combined	125 “
Total rise or lockage..	74 “
Depth of water on sills..	7 “
Breadth of canal at bottom..	36 “
Breadth of canal at surface of water..	60 “

From 22½ to 24 feet wide.

This canal succeeds the 32 miles of navigable water between St. Ours lock and Chambly basin. The canal overcomes the rapids between Chambly and St. Johns.

TRENT CANAL.

The term ‘Trent canal’ is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which, in their present condition, are efficient only for local use. By various works this local use has been extended, and by others, now in progress and contemplation, this will become a through route between Lake Ontario and Lake Huron.

The series is composed of a chain of lakes and rivers, extending from Trenton, at the mouth of the River Trent, on the Bay of Quinté, Lake Ontario, to Lake Huron.

Many years ago the utilizing of these waters for the purpose of through water communication between Lake Huron and Lake Ontario was projected.

The course, as originally contemplated and modified, is as follows:—

Through the River Trent, Rice lake, the River Otonabee and Lakes Clear, Stony, Lovesick, Deer, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam, the summit water, about 165 miles from Trenton; from Lake Balsam by a canal and the River Talbot to Lake Simcoe; thence by the River Severn to Georgian bay, Lake Huron; the total distance being about 200 miles, of which only about 15 or 20 miles will be actual canal.

The full execution of the scheme, commenced by the Imperial Government in 1837, was deferred. By certain works, however, below specified, sections of these

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waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon lake south, affords communication with the town of Lindsay, and, through Lake Scugog to Port Perry, a distance of 190 miles from Trenton.

The following table gives the distance of navigable and unnavigable reaches:—

From Trenton, Bay of Quinté to Nine Mile rapids ..	—	9
Nine Mile rapids to Percy landing.. .. .	19½	—
Percy landing to Heeley's Falls dam.. .. .	—	14½
Heeley's Falls dam to Peterborough.. .. .	51½	—
Peterborough to Lakefield.. .. .	—	9½
Lakefield to a point across Balsam lake.. .. .	61	—
	<hr/>	<hr/>
	132½	33

Total distance, Bay of Quinté to a point across Balsam lake.. 165½

From Sturgeon point on Sturgeon lake, 48½ miles from Lakefield, the branch through the town of Lindsay to Port Perry at the head of Lake Scugog.. .. . 27

The works by which the Trent navigation has been improved comprise canals, with locks and bridges, at Young's point, Burleigh rapids, Lovesick, Buckhorn rapids, Bobcaygeon, Fenelon falls and Rosedale; also dams at Lakefield, Young's point, Burleigh falls, Lovesick, Buckhorn, Bobcaygeon and Fenelon falls. By these works there is afforded communication between Lakefield, 9½ miles from Peterborough, and Balsam lake, the headwaters of the system; opening up a total of about 160 miles of direct and lateral navigation.

At Lakefield, 9½ miles from Peterborough, the dam at the head of the Nine Mile rapids of the River Otonabee maintains navigation on Lake Katchewanoe up to Young's point.

At Young's point, 5 miles from Lakefield, the dam between Lake Katchewanoe and Clear lake controls the water level through Clear and Stony lakes up to the foot of the Burleigh canal.

At Burleigh rapids, 10 miles from Young's point, a canal, about 2½ miles in length, passes the Burleigh and Lovesick rapids, and gives communication between Stony lake and Deer bay.

At Buckhorn rapids, 7 miles from Burleigh rapids, there is a canal about one-fourth of a mile long.

At Bobcaygeon, 15½ miles from Buckhorn rapids, a dam, 553 feet long, controls the water level to Fenelon falls.

At Fenelon falls, 15 miles from Bobcaygeon, a canal about one-third of a mile in length connects Sturgeon lake with Cameron lake.

The following is a list of the locks, with their dimensions:—

1	Lock at Rosedale (maintained by the Ontario government), 100' x 30' x 4' 6" to 6' 6" depth water on mitre sill.		
2	Locks at Fenelon....	134' x 33' x 5' 0" to 7' 6" depth water on mitre sill.	
1	" Lindsay ..	134' x 33' x 5' 0" to 7' 6"	" "
1	" Bobcaygeon ..	134' x 33' x 5' 8" to 7' 0"	" "
1	" Buckhorn ..	134' x 33' x 5' 0" to 9' 0"	" "
1	" Lovesick ..	134' x 33' x 5' 0" to 9' 4"	" "
2	" Burleigh ..	134' x 33' x 6' 0" to 8' 0"	" "
1	" Young's point.	134' x 33' x 5' 0" to 14' 0"	" "
1	" Peterborough .	134' x 33' x 5' 0" to 10' 0"	" "
1	" Hastings ..	134' x 33' x 7' 0" to 10' 6"	" "
1	" Chisholms ..	134' x 33' x 5' 0" to 8' 6"	" "

ST. PETER'S CANAL, CAPE BRETON.

Construction commenced.. . . .	1854
“ completed.. . . .	1869
Enlargement begun.. . . .	1875
“ completed.. . . .	1881
Length of canal.. . . .	About 2,400 feet.
Breadth at water line.. . . .	50 feet.
Lock.. . . .	One tidal lock, 4 pairs of gates.
Dimensions.. . . .	200 feet by 48 feet.
Depth of water on sills.. . . .	18 feet at lowest water.
Depth through canal.. . . .	19 “
Extreme rise and fall of tide in St. Peter's bay.. . . .	4 “

This canal connects St. Peter's bay on the northern side of Cape Breton, Nova Scotia, with the Bras d'Or lakes. It crosses an isthmus half a mile in width, and gives access from the Atlantic.

BEAUHARNOIS CANAL.

Construction begun.. . . .	1842
“ completed.. . . .	1845
Length of canal.. . . .	12 statute miles.
Number of locks.. . . .	9
Dimensions of locks.. . . .	200 feet by 45 feet.
Total rise or lockage.. . . .	82½ “
Depth of water on sills.. . . .	9 “
Breadth of canal at bottom.. . . .	80 “
Breadth of canal at water surface.. . . .	120 “

As the new Soulanges canal is now opened for navigation, the Beauharnois canal is abandoned for navigation purposes.

EARLIER CANALS.

A system of three canals preceded the Bearharnois. These were:—

COTEAU DU LAC CANAL.

Construction commenced.. . . .	1779
“ completed.. . . .	1780

SPLIT ROCK CANAL.

Construction commenced.. . . .	1779
“ completed.. . . .	1780

CASCADE POINT CANAL.

Construction commenced.. . . .	1782
“ completed.. . . .	1783

The locks were 20 x 6 feet, and provided for a draft of 2 feet. In 1814 the work of widening them to 12 feet was begun, and finished in 1817.

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Two canals were also constructed off Burlington Bay, Ontario. They were:—

BURLINGTON BAY CANAL.

Construction commenced..	1825
“ completed..	1832

DESJARDINS CANAL.

Construction commenced..	1826
“ completed..	1837

Neither of these canals required locks. They have for many years been abandoned. The depth of water provided in the first instance was $7\frac{1}{2}$ feet.

ST. LAWRENCE NAVIGATION—TABLE OF DISTANCES.

FROM STRAITS OF BELLE ILE TO PORT ARTHUR, AT HEAD OF LAKE SUPERIOR
BY WATER.

		Statute Miles.	
From	To	Sections of Navigation.	Total to Straits of Belle-Ile.
Straits of Belle-Ile.....	Cape Whittle.....	Gulf of St. Lawrence ...	240
Cape Whittle.....	West Point, Anticosti.....	"	201
West Point, Anticosti.....	Father Point.....	River St. Lawrence..	202
Father Point.....	Rimouski	"	6
Rimouski..	Bic.....	"	12
Bic.....	Isle Verte.....	"	39
Isle-Verte (opp. Saguenay).	Quebec.....	"	126
Quebec	Three Rivers.	" to tide-water.	74
Three Rivers.....	Montreal	"	86
Montreal.....	Lachine.	Lachine Canal.....	8½
Lachine	Cascade Point.....	Lake St. Louis.....	16
Cascade Point	Coteau Landing.. ..	Soulanges Canal.....	14
Coteau Landing....	Cornwall.....	Lake St. Louis.....	30
Cornwall.. ..	Dickinson's Landing ..	Cornwall Canal.....	11½
Dickinson's Landing	Farran's Point. ...	River St. Lawrence.....	5
Farran Point.. ..	Upper end of Croyle's Island..	Farran's Point.....	3
Upper end Croyle's Island	Williamsburg or Morrisburg..	River St. Lawrence....	10½
Williamsburg	Rapide Plat.....	Rapide Plat Canal...	4
Rapide Plat.....	Point Iroquois Village.....	River St. Lawrence....	4½
Point Iroquois Village.....	Upper end Presqu'Ile....	Point Iroquois Canal ..	3
Presqu-Ile	Point Cardinal, Edwardsburg.	Junction Canal.....	2½
Point Cardinal.....	Head of Galops Rapids	Galops Canal... ..	2
Galops Rapids	Prescott.....	River St. Lawrence....	7½
Prescott.....	Kingston.....	"	59
Kingston.....	Port Dalhousie.....	Lake Ontario.....	170
Port Dalhousie.....	Port Colborne.....	Welland Canal.....	26½
Port Colborne	Amherstburg.....	Lake Erie	232
Amherstburg.....	Windsor	River Detroit.....	18
Windsor.....	Foot of St. Mary's Island ..	Lake St. Clair.....	25
Foot of St. Mary's Island..	Sarnia	River St. Clair.....	33
Sarnia	Foot of St. Joseph Island..	Lake Huron.....	270
Foot of St. Joseph's Island.	Foot of Sault Ste. Marie.....	River Ste. Marie.....	47
Sault-Ste. Marie.....	Head of Sault Ste. Marie.....	Sault Ste. Marie Canal.	1
Head of Sault Ste. Marie..	Point aux Pins.....	River Ste. Marie.....	7
Pointe aux Pins.....	Port Arthur.....	Lake Superior.....	266
Port Arthur to Lake Shebandowan.....			45
Lake Shebandowan to North-west Angle.			312
North-west Angle to Winnipeg.....			95
Pointe aux Pins to Duluth.....			390

Of the 2,259½ miles from the Straits of Belle-Ile to the head of Lake Superior, 73½ miles are artificial navigation, and 2,188½ open navigation.

Straits of Belle-Ile to Liverpool, 1,942 geographical or 2,234 statute miles.

The total fall from Lake Superior to tide-water is about 600 feet.

The steamboat voyage from Collingwood to Port Arthur is 532 miles.

" " Depot Harbour to Port Arthur is 510 miles ; to Duluth is 644 miles ; to Chicago 525 miles, and to Milwaukee, 442 miles.

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TABLE of distances of Stations between the cities of Ottawa and Kingston.

No. of Station.	Name of Station.	Distances from Ottawa.	Locks.		Dams.			Length of Arti- ficial Canal at each Station in miles.	
			No.	Lift at Low water.	No.	Length.	Height.		
				Rise. Ft. In.					
		Miles.				Feet.	Feet.		
1	Ottawa.....	0	8	82 0	3	{ 230 1,320 1,616	13	4 00	
2	Hartwell's	4 $\frac{1}{4}$	2	22 0		100		28
3	Hogsback.....	5 $\frac{1}{2}$	2	13 6	1		320		60
4	Black Rapids.	9 $\frac{1}{2}$	1	10 0	1		300		12
5	Long Island.....	14 $\frac{3}{4}$	3	27 0	3		850		68
6	Burritt's.....	40 $\frac{1}{2}$	1	10 6	1	240	14	1 50	
7	Nicholson.....	43 $\frac{1}{4}$	2	15 2	1	500	9	0 50	
8	Clowes.....	44 $\frac{1}{2}$	1	10 6	1	481	16	0 05	
9	Merrickville.....	46 $\frac{1}{4}$	3	25 0	1	150	6	0 33	
10	Maitland.....	55	1	4 9	1	270	8	0 13	
11	Edmunds.....	59 $\frac{1}{2}$	1	10 10	1	343	8	0 06	
12	Old Slys....	60 $\frac{1}{2}$	2	15 6	1	250	20	0 25	
13	Smith's Falls.....	61 $\frac{1}{2}$	4	33 9	2	600	24	0 13	
14	First Rapids or Poonamalie.....	64	1	7 9	1	260	5	1 25	
15	Narrows.....	83 $\frac{1}{4}$	1	4 0	1	600	9	0 06	
Total rise at low water.....				292 3					
				Fall.					
16	Isthmus.....	87 $\frac{1}{2}$	1	4 0	....			1 25
17	Chaffey.....	92	1	12 6	....			0 13
18	Davis.....	94 $\frac{1}{2}$	1	9 0	1	300	15	0 06	
19	Jones' Falls	97 $\frac{1}{4}$	4	60 0	1	300	60	0 25	
20	Brewer's Upper Mills.....	108 $\frac{1}{4}$	2	19 0	1	200	20	1 75	
21	" Lower Mills.....	110	1	14 2	1	200	12	4 25	
22	Kingston Mills.....	120 $\frac{1}{4}$	4	46 8	1	6,042	14	0 25	
23	Kingston.....	126 $\frac{1}{4}$							
Total fall at low water				165 4					
Total.....			47		24	15,472		16 46	

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